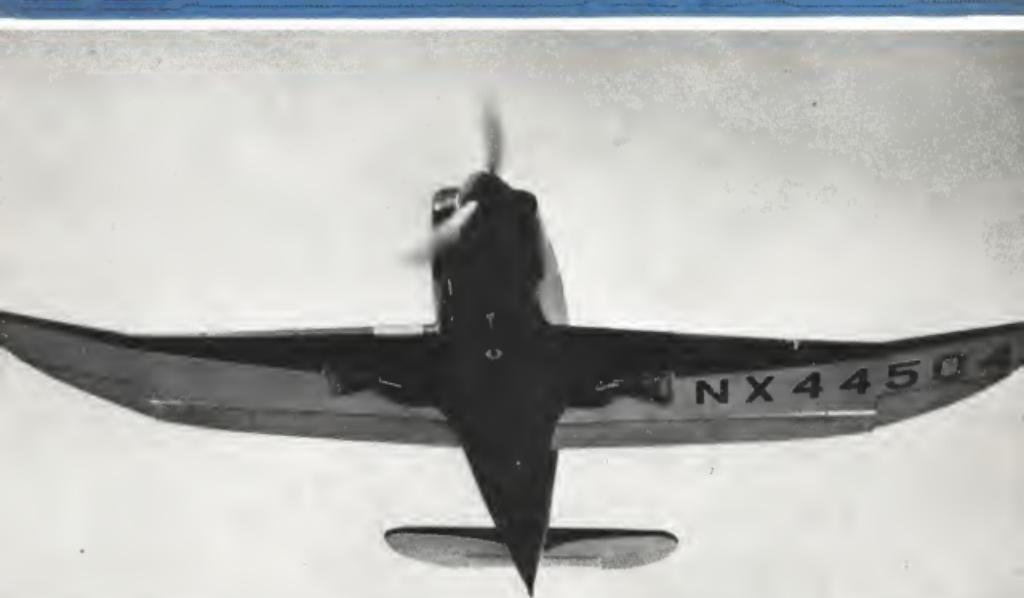


Aviation News

McGRAW-HILL PUBLISHING COMPANY, INC.

OCT. 22, 1945



Culver's Model V: New features of the spinproof post-war Culver Aircraft Corp. two-place Model V are shown to advantage in this first flight picture. They include 85-hp. Continental fuel injection engine, electrically retractable tricycle landing gear, full wingflaps linked with stabilizer for automatic trimming, wing dihedral, and one-piece elevator. The Model V is a development of the pre-war Cadet and subsequent Culver radio-controlled target planes.

Guided Bombs, Giant Powerplants Unveiled at Wright

Deadly new air weapons forcefully demonstrate vital role of continuing U. S. aeronautical leadership in dawning era.....Page 7

Culver V Features Control Changes, Fuel Injection

Manufacturer claims post-war, two-place spinproof lightplane is fastest in world for given horsepower.....Page 15

ATA Move to End Air Delays Opposed Abroad

State Department experts see success of action to eliminate customs, visa, passport slowing of air travel in Western Hemisphere.....Page 50

NPA Report Backs Industry in Urging Full Production

Planning association includes significant emphasis of non-scheduled and private flying potential; asks subsidized pilot training.....Page 12

"Grass Roots" Airline Support Sought by ATA Unit

Lines designate 400 workers throughout nation to secure local backing of carriers' position on transportation policies, problems.....Page 43

Maryland Sets Liberal Policy for Intrastate Airlines

Public Service Commission grants franchises to three companies, including bus line, ordering beginning of service within six months.....Page 36



FLASH!

These eight great airlines have purchased 103 majestic Lockheed Constellations to serve every major country on every continent:

**AMERICAN EXPORT * EASTERN * FRENCH
GOVERNMENT * K. L. M. ROYAL DUTCH *
K. N. I. L. M. ROYAL NETHERLANDS INDIES
* PAN AMERICAN * PANAGRA * TWA**

THE NEW AIRLINE STANDARD

Lockheed Constellation

Look to Lockheed for Leadership  Year Ahead in the Skies of Flight

© 1948 Lockheed Aircraft Corporation

THE AVIATION NEWS

Washington Observer



PLANT SALES BASIS—Chances that the aircraft industry's plan on plant disposal terms may be adopted by Surplus Property Administration and Reconstruction Finance Corp. appear brighter on the basis of the report on steel plants submitted to Congress by SPA. Cardinal plank of the steel plant policy bases price on prospective earnings, the same formula used by the aircraft industry. Now, it develops that SPA is considering the same yardstick for all "problem plants," among which are aircraft facilities.

ORPHAN PLANES—Within a few months, orphaned airplane models are going to start troubling the Army and Navy. Many of these models, on which production has ceased—such as the Navy's Catalina—have for several years of post-war use and they will need spares. Some manufacturers are reluctant to set up materials and space with tooling for these models and it may be that cannibalization will be the fate of many such craft. The Navy, which probably faces the most acute problem in regard to orphans, is taking steps to provide adequate spare parts for such planes as the Kingfisher, the two Catalina models, the TBM, and the PV-2. By this time next year there may be embarrassing shortages.

OVERSEAS SURPLUS—The three United States international air carriers, Pan American, TWA and American have been discussing purchase of surplus maintenance and communications equipment overseas with the Army-Navy Liquidation Commission's aviation division. Report is that the airlines will have to send their own men to the field commissioners overseas and make their purchases there. AAF is said to have been blocking airlines and also ANLC, who have buyers for certain types of equipment such as hydraulic packs and wheeled equipment which the Army refuses to declare surplus on the ground they might

need it themselves sometime in the future. Airlines feel they need heavier equipment to start giving service before foreign operators put in equipment in the fields.

SURPLUS SLOW-UP—Add reason for slow disposal of aviation surplus. RFC recently announced it has about 1,500 Galloway radial diesel engines, originally designed for aircraft, on sale by competitive bid. However, before this course of disposal was adopted, a Texas firm offered close to \$1,000,000 for the lot. RFC's board of directors took the offer under consideration. When the board did not act after several weeks, the prospective buyer withdrew the offer. Now, informed sources do not expect the total sale under competitive bidding to approach the original offer.

BY BED BASIS—It is expected, in informed quarters, that the Reconstruction Finance Corp. shortly will put the sale of surplus basic trainers on a bid, rather than a price-per basis. With less than 100 HT's sold out of more than 8,000 declared surplus, RFC seeks to determine whether the lack of sales is due to no demand, or to price. Disposal by bid should furnish an indication to the answer.

AIR REPORT—The report of the Interdepartmental Committee for the Demobilization of the Aircraft Industry, originally formed by the various secretaries for air of the War, Navy and Commerce departments, and now a subcommittee of the overall government Air Coordinating Commission, will shortly be submitted to Congressional committees concerned. It will set forth the peacetime measures that must be taken if the overall requirements of a future mobilization are to be met.



All-metal Globe Swift, a promising lightplane contender



Bridging the "V" brings a New Challenge to Aviation

THE Aviation industry shares its responsibility with Private Citizens, American Business and Government in making our nation the world's greatest peace-time power. One of our major problems is how best to serve to promote Peace and National Security. For modern warfare has eroded all thoughts that the United States is an isolated nation.

Under wartime necessity, the advancement of American Aviation was one of the great industrial miracles of all time.

Now the challenge of peacetime provides an even greater stimulus to carry on the kind of *unstoppable research, development and production* which has been built up in so short a time under our power to destroy force in the advancement of Victory.

For the strength of today and tomorrow should be used for the advancement of civilization, not for the destruction of mankind.

At Bell Aircraft our sights are aimed at passing into civilian service the same types of aeronautical skills

and achievements as were identified with the Avrovalve, the Kingcobra, the Bell-bell B-50 Superfortress and the Avrojet — America's first jet propelled plane.

Bell Aircraft pledges to the Citizens, to Government and to American Business that we will intensify our research and scientific development programs. Soon we shall bring to life a new family of aircraft, the Bell Helicopter "The Mystery Carpet"™ that offers door-to-door delivery, that can fly in and land in inaccessible spots reached by no other mode of travel . . . a helicopter with Bellian, engineered stability. As in the past, now in the present, look to Bell Aircraft to be the civilian pacemakers of Aviation Progress.

*Not applicable for U.S. and Canadian foreign countries

BELL Aircraft CORPORATION
Buffalo 5, New York

A Bellanca Division

PACEMAKER OF AVIATION PROGRESS

AVIATION NEWS • October 22, 1945

RESEARCH RESULTS

Guided Bombs, Giant Powerplants Unveiled At Wright Field Exhibit

Deadly new air weapons forcefully demonstrate vital role of continuing U. S. aeronautical leadership in dawning era of possible scientific, total destruction.

By ALEXANDER MCSURELY

Necessity for continuing U. S. leadership in aeronautical research and development was brought home forcefully last week to members of the Senate and House, and the public generally, at Wright Field, Dayton, Ohio, where the Air Technical Service Command lifted the cloak of secrecy from some of its deadly new aerial weapons at the AAF's "Air Fair."

In a test show of exhibits from the various experimental laboratories of Wright Field which extended a mile-long midway on the huge concrete apron of the flying field, laboratory specialists turned lectures explained the operations of television bombs, huge new engines, jet propulsion, radars, radar, and other developments of World War II.

► **Flight Bombs**—Meanwhile, overhead flew an all-inclusive AAF type "Airmada," including the giant B-52, while their sister ships and many strange experimental aircraft, both American and captured from the enemy, were on display below.

Newly disclosed aerial weapons on display in the lobby included ► The radio-controlled Avro bomb, an ordinary bomb to which a radio-controlled fin was added. This bomb was first used in precision bombing in destroying the Avro viaduct near Rome, to break the German supply line to that city. It was later used in Burma in early 1945, to destroy every bridge which was of strategic value to the Japanese Bombers in combat but usually released four Avro bombs at once, picked the one which seemed best aimed and by radio control headed it directly



House of AAF Developments: First aerial photograph of the \$150,000,000 Wright Field, Dayton, Ohio, headquarters of the Air Technical Service Command, as it has developed to meet wartime demands. Shown 1. Office buildings, 2. Aeronautical museum, now

used for additional offices, 3. Aero-Medical laboratory, 4. Wind tunnels, 5. Potters Field, 6. Wright Field area "A", 7. Hangars and slope, 8. Assessment laboratory and range, 9. Static test laboratory, 10. Flight test, 11. Equipment laboratory, 12. Offices

to the target. The other three bombs, responding to the same control, would follow the leader to hit the target also.

► The Gilco television glider bomb, which carries a ton of explosive and records a television transmis-

ter under its nose. It has small wings and a double tail. The television unit transmits to a screen in the plane from which the bomb has been dropped, showing the bombardier exactly where it is heading. He can correct its direc-

tion by radio control, for a 30-mile flight, while it is traveling at 340-mph, although his plane may be miles away, heading for home. ► The ROC high-angle television bomb which has a similar transmitter in its nose, a radio controlled fin at the tail, and a strange-looking "hook" around its middle. The bombardier follows its movements on the screen, and may aim it at any angle necessary for a direct hit, by means of a static control in the plane.

Combination of these or even more deadly long-range guided missiles, with an atomic bomb warhead would be the obvious future evolution of these weapons offering the prospect of total destruction of warring nations within a few hours.

Development of the guided missiles stemmed from the application of remote radio control to small model planes used as targets for anti-aircraft practice.

Latest development in target planes, the Culver PG-14 which cruises at 340-mph and is powered with a 188-hp Franklin engine, was displayed at the Air Fair in a flight from Columbus to Patterson Field. The successful flight ended in a crash, when the plane crumpled its nosewheel in a crosswind landing at Patterson Field.

► **Robot Fleet**—The demonstration offers possibilities of long-range future flights of fleets of atom bombs controlled by a mother plane, or by a panel at the home base. Chaotic four-engine bombers loaded with explosives were crash dives on enemy targets in Europe by radio control during World War II.

Powerplants. Laboratory display showed a number of heavier-than-air reciprocating engines as well as displaying the General Electric J47 engine, which powers the Lockheed P-80, and other jet propulsion engines. The display included:

► Two big Lycoming experimental engines, are believed to be the most powerful reciprocating engines yet developed. This 36-cylinder, after radial motor, weighs 5,900-lbs, and develops 3,000-hp, for takeoff. Designated XR-768, the engine is designed for flight, not yet built. The second Lycoming, XI-43625, is a 12-cylinder flat engine weighing only 1,448-lbs and credited with 2,500-hp at emergency rating.

► A 42-cylinder Wright liquid-

cooled engine, Model R-2160, designed for the experimental fighter XP-56, and rated at 2,800-hp.

► A 3,600-hp Chrysler 16-cylinder aircraft engine, weighing 2,500-lbs, designated Model X-1228-11.

► A display showing two Allison engines with long extension shafts running a six-blade dual rotation propeller, similar to the installation in the Douglas "Mystere" XB-42 and other Allison planned systems (AVIATION NEWS, Oct. 8).

► Displays of the leading Pratt & Whitney, Wright and Allison engines which powered most World War II warplanes.

Many interesting applications of radar were shown, among them a radar heliport which enables a pilot to spot any enemy approaching from the rear long before he comes in sight, and to fire his gun on the plane. A motion picture explained the workings of GCA, the Gilliland Ground Control Approach system which uses radar to enable planes to make blind landings in zero visibility, and which is expected by many experts to be a time-saving answer to the cumbersome approach systems now in use at commercial airports.

Most interesting experimental plane on exhibit was a tiny unarmed flying wing jet fighter which carried the pilot in a prone position with his head encased in the plastic nose, and a chestnut to make him more comfortable in flight. The plane had a towing connection in the nose and had



Great Licensing—Developing 3,000-hp at takeoff, this monster Lycoming 36-cylinder, radial engine weighs 5,900-lbs. It was first shown to the public recently at the AAFA's Air Fair at Wright Field. Believed to be the most powerful reciprocating engine for aircraft yet produced, the Lycoming XR-768 is designed for a plane which has not yet been completed. Its size may be gauged by comparison with the officer, Lt. S. M. Kauffman, Boeing, standing beside it.

been towed to determine its flight characteristics before it was cast loose on its own. No performance data on this plane was made available.

► **Nazi Threat**—Highlight of the enemy equipment display was the Babisch SP-38 Natter (Viper), a German plane which was launched vertically from a rocket platform to a 30,000-ft altitude. After firing its 24 rockets at the enemy

the plane is designed to break in two, with a parabolic descent for explosive engine to the ground for recovery, while the pilot also parachutes.

New Construction Materials Studied

A wide range of research projects on woods and plastics as well as other aircraft materials, improved aircraft structures and numerous projects associated with high-speed airplanes are being carried out at the Research Laboratory of the Curtiss-Wright airplane division at Buffalo.

The Subcommittee on Wood and Plastics for Aircraft of the National Advisory Committee for Aeronautics held a two day meeting at the laboratory last week. Dr. C. C. Purman, director of research, was host.

► **Test Cells**—The equipment of this aeronautical laboratory includes a new high-speed wind tunnel, soon to be placed in operation, and a special test chamber in which the atmospheric conditions of high altitudes can be closely simulated.

Although light metals are the currently predominant materials used in aircraft manufacture,

Television Bombs—Two versions of television-radio-controlled bombs, were unveiled for the public last week at the Air Fair held by Air Technical Service Command at Wright Field, Ohio. The GE-4 glider bomb, above, and the ROC high-angle bomb, below, both have television transmitters in their noses which send a continuous picture of where they are heading. The image is picked up on a screen in the plane from which they have dropped, so that the bombardier, by manipulating radio controls, can correct their fall if necessary, putting them "on target."



particularly for large and high-performance aircraft, research on wood and plastics for aircraft is being vigorously pursued in many laboratories. A large amount of research in this field is being sponsored by NACA.

Considerable time was devoted at the Buffalo meeting to so-called "sandwich" construction, which is reported to hold real promise for all types of aircraft, including high performance models. Sandwich materials are so named because they consist of thin-gage "faces" of high-strength material, bonded by a special synthetic material adhesive to a considerably thicker, low-density core material.

► **Even Glass**—Superthin sheets of steel, aluminum, or even high strength glass fabric might be used as faces bonded to such low density material as balsa wood or a foamed plastic. Some engineers believe the inherent rigidity and strength of such materials could considerably lead to construction of aircraft without the usual supporting members which limit space and account for much of the weight of aircraft as now built.

An experimental airplane fuselage has been constructed of plastic sandwich materials which is 67 percent stronger, with almost the same weight, than a similar fuselage of metal construction.

Lodwick Honored For AAF Work

One of the few times the award has been made to a civilian, the Bronze Star has been bestowed by the AAF on Albert I. Lodwick, president of the Lodwick School of Aeronautics, Lakeland, Fla. The citation credited Lodwick with suggestions resulting in "many technical developments and changes in procedure" following his overseas trips as a member of special consultant missions for the AAF.

Long one of the country's leading aircraft service specialists, Lodwick trained many Army airmen during the war at his school, in addition to his contributions as a consultant. In the latter capacity, he traveled some 41,000 miles in 1943, 1944 and 1945, and visited all fronts where American troops were in action.

► **Star-Studded**—Award was made at AAF headquarters in the Pen-



"Meritarius Civilis": Lt. Gen. James H. Doolittle was the Bronze Star medal on Albert I. Lodwick, president of Lodwick School of Aeronautics, Lakeland, Fla., at reward for meritorious service overseas as special technical consultant for the Army Air Forces.

isgen by Lt. Gen. James H. Doolittle, whose Eighth Air Force was a major recipient of Lodwick's advice. Present at the ceremony were Lt. Gen. Ira Eaker, deputy AAF commander, and Maj. Gen. C. C. Chennedy, Edward M. Powers, Louis Norstad, and Brig. Gen. William M. Welsh.

RPC Components Post Resigned By Peterka

Lt. Col. A. M. B. Peterka has resigned as chief of the aircraft components section of the office of comptroller of the Reconstruction Finance Corp., effective Oct. 31. He is being succeeded by Col. George H. Morarity, formerly of Wright Field.

Col. Peterka will remain the manufacturing firm of Leman and Sessions, Cleveland, Ohio. Before assuming his duties at R.F.C. last April, he was in the AAF for three years. He originated the plan for redistribution of aircraft parts and components which evolved into the Aircraft Scheduling Unit.

► **Before Entering the Army**, Col. Morarity was in the automobile manufacturing business. Started at Wright Field for four and one-half years, he was in charge of allocation and control of all raw materials, machine tools, plants and manufacturing equipment. He supervised the setting up of plants built for the aircraft industry.

New Non-Scheduled Dates Are Set

Civil Aeronautics Board has set an oral argument for Nov. 26 on the subject of proposed economic regulation of non-scheduled air service, and has extended until Jan. 21 the due date for filing comments from the industry on proposed safety regulations. Part II of the Civil Air Regulations.

All persons intending to participate in the oral proceeding should advise Francis W. Brown, CAA's chief examiner, by Nov. 8. The examination should set forth the name of the person who will argue, the party or group of parties whom he will represent, and the amount of time desired for presentation. Brown announced, "It will be of considerable assistance to the Board if individuals with a common interest in this proceeding can arrange to present their argument through one representative. As soon after Nov. 8 as possible all parties will be advised of the names of the persons who will argue and the time allotted."

► **Subject Stressed**—It was emphasized that the argument will relate only to proposed economic regulation. A date had not been set for oral discussion of the safety regulations. In granting more time for the industry to forward its comments on these proposals,

the Board anticipates aid from various regional and national meetings to be held in the next three months.

State Control Seen For Airport Funds

Congressional action set stage for final decisions and passage of construction programs.

State governments which have won a hard fight to obtain complete control over federal expenditures for airport development appeared assured of an unequalled victory in Congress last week.

Following loss of the Senate, the House adopted an amendment to the \$1,300,000,000 Los airport bill requiring that all federal grants for airport construction shall be furnished by state governments. The vote on the amendment was 135 to 126.

► **Field Difference**—The House amendment phased the airport program, without qualification on a state-by-state basis. It carried the stipulation contained in the Senate-passed airport bill, which would require state governments to use 65 percent of federal funds on small flying fields and 15 percent on commercial transport fields.

The House appeared set to approve the Los airport measure late

last week following overwhelming rejection of an amendment to kill the bill.

Differences in the Los bill and the Senate-passed McCarran airport bill would then have to be ironed out by a joint conference committee of the two chambers.

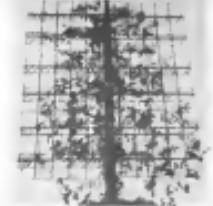
► **Size Issue**—One of the major issues in the airport program, which will have to be decided in conference, is the size of the program.

The Senate truncated the program proposed in the McCarran bill down to a total of \$850,000,000. The House, however, voted last week to retain the \$1,300,000,000 airport program contemplated in the Los bill.

Under the Senate-passed bill, state governments would be required to match federal expenditures of \$15,000,000 annually on a 50-50 basis over a five-year period.

► **10-Year Plan**—The Los bill would extend the program over a ten-year period, involving a total federal expenditure of \$600,000,000. States would be required to match federal funds on a 50-50 basis, and the maximum federal expenditure in any one year would be \$100,000,000.

An amendment offered by Rep. Carlson, (R-Kans.), to cut the airport program from a total of \$1,300,000,000 to \$1,000,000,000 was rejected by the House 146 to 80.



RADAR "TREE":

Concealed to resemble a tree, this radar installation near Bolling was used by the Luftwaffe to detect approach of Allied strength. Uncovered by air bombardment specialists as part of the Ninth Air Force program to neutralize facilities of the Luftwaffe, this lattice-like construction illustrates marked differences in appearance from the more compact American design.

Airpower Taxation Approved In Poll

A survey made by Sorenson and Benson, Princeton, N. J., indicates that a majority of the American public not only desires post-war national security in the air, but is willing to pay extra taxes to achieve it.

The survey, released through the Aircraft Industries Association shows that 91 percent of those questioned, desire post-war air power seven percent do not, while two percent have no opinion on the subject.

► **Weekly Rating**—When this question was asked, "Would you be willing to pay a tax equal to a week's earning to maintain a strong air force," the response was 87 percent yes, and 12 percent no, while 1 percent opposed an air force and four percent were undecided and two percent had no opinion.

So far as the product of the American aircraft manufacturing industry is concerned, 80 percent held that the United States makes the best airplanes, three percent held that the best airplanes were made in Germany, two percent England and one percent Russia, while three percent did not opinion. The survey did not indicate the number questioned.

NPA Report Backs Industry In Urging Full Air Production

Planning association includes significant emphasis of non-scheduled and private flying potential; asks subsidized pilot training; manufacturing needed vital reservoir of military, commercial strength.

By SCOTT HERSHY

A strong aircraft manufacturing industry is an absolute prerequisite to the proper functioning of the other two interrelated elements of our aviation—military air force and civilian air commerce. In the report of the Advisory Committee on the Aircraft Industry of the National Planning Association:

The committee, in its just-issued report, says that the aircraft manufacturing industry is the reservoir from which the strength of the other two elements is drawn and raises the question as to what extent the aircraft industry will continue to be a reservoir.

Export Role

The Advisory Committee on the Aircraft Industry of the National Planning Association recommends that the aircraft manufacturing industry exports have accounted for a larger proportion of the dollar volume produced than have exports in almost any other manufacturing industry.

The committee recommends that, in order to promote our aviation abroad, government policy should be directed toward the following ends:

- Liberal policies with respect to licensing, to export and import, to manufacture and sell abroad our aircraft and heat damage to the extent consistent with national security.

- Effective cooperation of U. S. military, commercial and civil air authorities, in prompt resolution of technical and safety of aviation in foreign countries, as well as in the furtherance of our own aviation.

- Technical assistance is friendly foreign countries, especially to those countries which have had little or no technical training in this country available to authorities of other countries. The cost of such training should be born partly by the foreign government and partly by our own government.

tion industry, to what extent it will produce for commercial uses and, finally, what proportion of its present capacity will be neither military nor commercial production.

► **War Shuts**—The industry, before the war, was about 61 percent a military industry, that percentage of its output going to the armed forces. During the war, of course, it was 100 percent a military industry.

The committee feels that on the military side the industry should maintain production at a rate sufficient not only to maintain a high level of research and development and to supply the air forces with the best airplanes by way of current replacements, but also to make it possible rapidly to expand production which would be necessary to meet emergency requirements of international obligations and national defense.

On the civil side, the committee believes that we should strive for the greatest development of air commerce in order that as much of our essential aircraft manufacturing industry as possible may be separated from this economic useful source.

► **Best Fields**—The committee's report noted significantly that non-scheduled commercial and private flying offer an even greater commercial potential than scheduled air transportation. Their promotion, the report says, should be accomplished by measures calculated especially to improve the safety and utility of the smaller airplanes. By utility the committee explained it means a combination of economy, reliability, and convenience of use.

Recommendations were made that the federal government should make provisions of a large number of effectively planned and located airports, together with airways improvements, navigation facilities, and traffic control; make provisions for research and experimentation with respect to the



NEW FAA DIRECTOR:

Joseph J. Mitchell, Jr., has been named executive director of the Federal Airlines Association to replace Don V. Seaman, who has accepted a position with National Aerospace Association. Mitchell, former manager of FAA, takes over the association office in Washington after having been manager of Hawthorne Airways and manager of basic operations of the Hawthorne aircraft organization. He has had charge of all Hawthorne activities at the Curtiss-Wright aircraft school. Mitchell previously was a specialist in private flying and served as second region superintendent of CAA's New York Training Service.

smaller types of airplanes, especially new types of unconventional design, and their accessories.

In addition, the committee believes there should be a minimum of economic regulation of unscheduled flying, as well as the elimination of unnecessary technical regulation not contributing to safety.

► **Pilot Plan**—The report recommends that proper action be taken to ensure that a substantial number of young men and women, including Negroes, be educated especially to improve the safety and utility of the smaller airplanes. By utility the committee explained it means a combination of economy, reliability, and convenience of use.

Recommendations were made that the federal government should make provisions of a large number of effectively planned and located airports, together with airways improvements, navigation facilities, and traffic control; make provisions for research and experimentation with respect to the

work of stimulating interest in aviation through encouragement, guidance and technical assistance should extend through all levels of education, in addition.

A research and development

program should be carried on, the committee says, at a rate which will assure our continued technological and industrial leadership in the field of fundamental research, where the object of the attainment of basic knowledge is not limited as applicability to any specific project. The committee believes government-financed fundamental aeronautical research should continue to be carried out by the National Advisory Committee for Aeronautics. In applying research and development, where competitive excellence in applying principles to particular objects or processes at the first import, the committee holds that industry should take the lead.

PT, Cessna Prices To Be Lowered

New "floor" prices for surplus primary trainers and Cessnas are expected to be set shortly by the Reconstruction Finance Corp., dental agency for surplus aircraft. The new rates, implementing the changed sales policy on surplus trainers and Cessnas (AVIATION NEWS, Sept. 17), are expected to be the old ceiling prices of \$4,600 on PTs and \$8,880 on Cessnas. Lowest price on PTs, however, will now be \$500 in place of \$400.

RFC is studying closely the changes in regulations governing all surplus sales to veterans, to determine the effect on aircraft disposal. Initial results show that there will be little effect, although the elimination of the \$2,500 limit on purchases may result in more ex-service men entering business as aircraft service operators.

While dropping the floor for Cessnas from \$3,000 to \$2,400, RFC is expected to establish separate price ranges based on condition for the different models of these aircraft.

► **Models with Heavy Wing** (\$3,400 base weight), constant speed propeller, probably will be tagged at \$8,500 when in above average condition; \$7,750 when in average condition; and \$7,393 in below average condition.

► **Cessna with Heavy Wing, Wooden Propeller**, likely will sell for \$3,000, \$4,350 and \$5,365 according to the three grades of condition. Planes with light wing (\$1,100-lb. gross weight), constant speed propeller, will range from \$4,500 to \$3,393, to \$3,883. These with light

WPA End

No change in the present handling of aviation by WPA is contemplated, which that agency gives way to the new Civil Production Administration on Nov. 3. Since liquidation of the aviation division of WPA, many priority assignments have been made to aircraft manufacturers and of surplus equipment. This will continue under the direction of Wilson B. Hoeks, chief of the foreign and aviation sections of the Special Rating Division.

wing, wooden propeller, and in above average condition, will be priced at \$3,000. All others of that category will be \$2,400.

In addition to the revised price scales, two other recent developments are expected to share strongly in the clearing up of the tremendous number of surplus aircraft on hand. The first is the ever-growing volume of combat aircraft being scrapped by RFC. The AAC is lifting a price of \$600 planes being flown daily to RFC scrap centers.

The second is the surprising response to the educational program under which aircraft are sold to schools and colleges, for non-profit use, at very low prices. To

Complete Automatic Flight Revealed

"Push-button" flying, long forecast by some enthusiasts as possible in the post-war era, is feasible now, according to war-weary design review by the Air Force and Honeywell, Minneapolis, Minn.

Bentley exhibited in New York as the firm's new electronic pilot which Russell R. Whampert, sales manager of the company's aircraft division, said "will make possible a plane to be flown to its destination without the necessity of a flight crew's making the controls."

► **Blind Landing** — Weighted to the autogiro control plane in flight, the one that can be "tossed" in a radio beam. The device contains three small motors, gyroscopes and a control panel. Additional instruments can be coupled to the auto-pilot, making possible blind landings without human touch on the controls.

Whampert said it is practical to equip an aircraft with pushbutton mechanism tied into the automatic radio direction finder.

date, total disbursements in this category are 166 — 16 members, 61 fighters, 166 trainers and seven gliders.

► **School Book** — There has been a number of applications from educational institutions in recent weeks, with a massive number of requests now in negotiation.—W. R.

Four Air Firms Change Top Posts

Last executive appointments, resignations listed by Northrop, TA-Carter, Aeron, vice-president shifts predominate.

Vice-presidential appointments and resignations in the aviation industry highlighted late personnel news this week.

Theodore C. Coleman, vice-president of Northrop Aircraft, Inc., has resigned to organize and head a South American import and exporting business with headquarters in São Paulo, Brazil. He will retain his membership on the Northrop board of directors, however, and will represent the Northrop Company in South America.

His resignation was accepted at a board meeting during which several executive promotions were voted. Robert H. Eason, Jr., industry

with each button timed to a different cycle. After takeoff, the pilot can push the proper button for a gear, flap, rudder, aileron, and trim, and the plane will move directly to the destination.

Whampert pointed out that while these are other war-born equipment, make flying simpler, more economical and safer for passengers and airline operators, they were developed originally for the use of the passenger and private flier.

► **Comparisons** — The other electronic systems are: cabin temperature control, "formation flying," landing position indicator and control of aircraft direction. The electronic pilot, engine temperature control, a goniometer gauge, a cathode ray oscilloscope, a remote transmitter, an altitude gauge which can regulate instrument theory or altitude, flight director, display of the position and the volume of the airplane and the volume of fuel in the tank, a device to control variable flow from various fuel tanks.

Sales Staff Rise

Organization of distributor units by the leaders of personal plane manufacturers is crystallizing into a set-up far beyond the number of dealerships existing for the more popular aircraft for years. The pre-war "big three" companies in business-plane sales, Piper, Taylorcraft and Aerocar, now have approximately 68 distribution points. Besides these, Piper and Aerocar have been able to 260 dealers, while Taylorcraft has more than 200, and may increase this number.

Flight equipment is listed from the sky, and conveniently catalogued with an $\frac{1}{2}$ to $\frac{1}{4}$ page. Aerocar's catalog lists 1,000 items, and Taylorcraft's catalog lists 1,000 items.

Tuna Fleet Plane Opens New Fields

Use of the Republic Seabee aircraft as a sport plane for the San Diego, Calif., tuna fleet is being watched with interest by the fishing industry as the possible opening of a new field for small seaplanes and amphibians.

The four-place Seabee was carried on the big new tuna boat, *Pan-American*, skippered by M. M. Hodges and owned by Anthony Montanoli, who also designed and built the motor clipper. Largest of the tuna fleet, the *Pan-American* is big enough to carry a small amphibian without trouble. The Seabee is to operate from a land base in Costa Rica, securing the Central American market for schools of tuna, and will direct the fleet to the best fishing areas by radio.

Original—While small sport planes have been used by warships for many years as scouting planes, it is believed that this is one of the first instances of a sport plane used with a fishing fleet.

Rouge Glider Shown

A rotary-wing glider, with possible sport flying applications, which operates on the principle of auto-rotation of two blades without power in a descending flight, is under experimental test at Wright Field. Shown to the public for the first time at the AAP "Air Fair," the entire device weighs only 34-lbs., is designed to carry a load of 240-lbs. to a landing.

Developed as a mechanical par-

Briefing For Private Flyers and Non-Scheduled Aviation

First use of a helicopter for a "front dispersal" experiment is scheduled at Michigan State College, East Lansing, within the next few days. A. W. Farwell, president of the agricultural engineering department, has arranged to have an AAP helicopter flown to the college experimental farm from Wright Field for this test. The experiment indicates that the air is usually from 5 to 10 degrees warmer at about 50-ft. above the ground than at ground level during "cold snaps." The Michigan agricultural experts anticipate the whirling helicopter blades may fan the warmer air down to the ground thus preventing frost on the college orchards and truck farms.

NEW INDIANAPOLIS HAVEN—New haven for the private flyer in the Indianapolis area will be Brightwood Airport, 200 acre field only 3.7 miles from the well-known center of the Hoosier capital, Monument Circle. Better still, the airport will have regular city bus and trolley service. The fourth private airport to serve Indianapolis, Brightwood Airport was approved by the county planning commission only after a lengthy fight and over the protests of neighboring landowners. A trio of local residents, Mrs. and Miss Esther Lathem and Jerry Roach, will operate the field, with Mrs. Esther Lathem, ground school instructor and private flyer, in charge. Approved site call for 4,800-ft. sod runways, so that the field will be suitable for fairly large planes, and may eventually be used by feeder airlines as a convenient terminal with public transportation to downtown Indianapolis.

MORE WORK FOR FBI—Amendment to the Dyer motor-theft law, which has now become effective, makes interstate transportation of a stolen airplane, a federal offense. The amendment sponsored by Senator Pat McCarran, and recently signed by President Truman, gives the Federal Bureau of Investigation and other federal enforcement officials authority to arrest and prosecute anyone who flies a stolen plane over a state line. The motor-theft act has been the most effective method of breaking up "hot-car rings" which used to take a heavy toll of fatalities. And now that personal planes are expected to become "a big business," most aviation people agree that similar protection for the private plane owner is well worth having.

TAYLORCRAFT SALES PLAN—Taylorcraft aviation division of Brushell Aerocraft Products, has announced completion of arrangements for a special sales training program for its distributors and dealers, under supervision of O. M. Bell, sales manager. The course is in many respects similar to those previously unexecuted by the other two largest lightplane manufacturers, Aerocar and Piper, since all three courses are designed by the Aviation Institute of Professional Sales Training for the same purpose. Supplementary training sessions are planned by Taylorcraft at the factory and at other meetings in all parts of the country during the next few months. Importance of adequate salesmanship training is emphasized by Taylorcraft, because of the keen competition which it is to be expected in personal plane sales as soon as the first post-war demand is satisfied and the sellers' market becomes a buyers' market.

IDAHO TOURIST AIRPORT—At Thousand Springs Amusement Park, Hagerman, Idaho, extensive accommodations for air tourists are being constructed by Herbert Chapman, owner of the new field. These include tourist cabins, a lodge building, including a ballroom, and dining room with 400-person capacity, cocktail lounge, game rooms, 24-hour service coffee shop, swimming pool, tennis court, riding academy, motor cycle riding, and Snake River boat and rental boats for fishing and duck hunting. The park, located on Snake River Canyon, will have a 4,200-ft. main runway, under block hangar with showrooms, shops, parts department, and A & E mechanics and flight instruction. Lorraine Stevens, serial coyote hunter, has been named manager of the facility. —Alexander McMurtry

able to load personnel and supplies behind enemy lines, the Rotocopter is launched from a transport plane in flight. The operator sits on a bicycle seat, controls the device's direction by vertical and horizontal control surfaces behind him.



of course we'll

"KEEP 'EM FLYING"

Air Power has clearly demonstrated its vital role in helping to terminally the greatest struggle that man has waged against man. *

So, too, Air Power is Peace Power, for by the lessons learned through war's testing school, there have ensued such accelerated developments of safety, comfort, and efficiency, that this mighty power is bestrengthened to guard the rights of all. *

Years of experience in creating the famous P-47 Thunderbolt to exacting specifications of the Army Air Forces, and engineering and development work in the constantly bewildering channels of aircraft construction, have developed a highly skilled group of scientifically trained workers here at Republic. We will continue to build planes needed to polish and maintain world peace, and in addition, shall apply the energies of our seasoned personnel to the building of a line of aircraft for the peace time market. Republic Aviation Corporation, Farmingdale, L. I.

REPUBLIC AVIATION
CORPORATION
Makers of the Mighty Thunderbolt

Peacetime payloads are going up

Air-borne commerce will now climb rapidly to its destined high place in global trade. Jet assisted take-off, war-born and perfected in war, will play an ever more important part in this ascendancy of possible commercial aviation. For whether they be passenger or cargo, payloads go up with Jet Assistance. Yes— heavier payloads go up . . . and so do profits. That is what interests the operator with a hard business head.

Makers of all jet assisted take-off motors used by the Army and Navy, Aerojet Engineering Corporation is ready to discuss application of this new power to your operation problems. Inquiries from responsible

sources are invited. Would you like to know more about Jet Assistance—what it has done—what it can do? Then write us today for the fascinating informative booklet—"Report from Aerojet."



THE POWER OF THE FUTURE

Aerojet

AEROJET ENGINEERING CORPORATION • AFFILIATE OF THE GENERAL TIRE & RUBBER CO.

PRODUCTION

Plea For Government Policy Outlines East Coast Planning

Bell, United stress helicopters; C.W. Martin stress military order need; Fairchild sees "new" industry; Grumman, Republic list other projects during testimony before Senate committee.

Crystallization of postwar plans among East Coast aircraft manufacturers awaits to a considerable degree a definite Administration aviation policy and the setting up of a clearly understood military program of procurement, research and development.

This was plain in the testimony of leading East Coast aviation executives before a Senate subcommittee at which a hint of immediate programs was given.

• Bell—E. D. Bell, president of Bell Aircraft, and his company was convinced that the utility of the helicopter is so high that it should immediately be the basis for an entirely new air industry. He said the company was so impressed with the successful flight characteristics of their experimental helicopters that Bell's board of directors has authorized the production of a substantial number. The new helicopters now designed range in power from 150 to 500 horsepower and are suitable for a wide variety of commercial, industrial and military uses.

The company's work in the military aircraft field is now primarily concerned with experimental and development work. Bell said the company has always placed special emphasis on research and developmental aviation and there is no intention to alter this program. He said the company was engaged in several projects which call for the development and operation of high speed unconventional aircraft.

• United—H. M. Horner, president of United Aircraft Corp., and his company plan to "aggressively pursue commercial markets for engines, propellers and helicopters, domestically and abroad." He added that United does not plan to enter any fields other than aircraft at this time.

• C.W.-G. W. Vaughan, president

of Curtiss-Wright, reported that his company will complete delivery of all remaining military production except for some spans and certain experimental contracts this month. Curtiss-Wright has approximately 23,000 employees on the payroll today compared with 127,000 on VJ Day. Of the 23,000, about 18,000 are engaged in termination while a substantial percentage of the others are in assembly operations, a large part of which will be completed by the end of this month.

Curtiss-Wright has a small number of commercial orders but Vaughan said no matter how successful the company is in increasing these, they must rely heavily on military orders for some years to come if they are to maintain a nuclear structure sufficiently strong and sufficiently skilled to supply the Air Forces with advanced types of aircraft and other devices.

Vaughan said Curtiss-Wright is definitely interested in the development of products either related to or wholly unrelated to the aircraft industry and had devoted considerable time and effort recently to the study of dozens of products which fall within that category.

• Fairchild—J. Clinton Ward, Jr., president of Fairchild, looked to the future and the Douglas defense division is ready to start employment with plans to continue his Durand research which has applied to war products and which now can be phased into the needs of the post-war military branches in addition to new uses for peacetime products. In this manner, he added, they hope to create a new industry that did not exist before the war.

• Ranger—The Ranger Engine Division, he explained, presents a problem that is large and complicated since no current demand exists for the specialized military

LIGHTWEIGHT RECEIVER:

First post-war aircraft radio receiver of the Ranger Aircraft Radio division of Electronic Specialty Co., is this Model 117 weighing 1.5 lb., 12 ounces. A five-tube superheterodyne with autotune volume control, it operates on batteries. The cover and a three and three-quarters inch cube and the receiver may be mounted anywhere as the transmitter panel through a three-inch hole. Batteries pack measures 2½-in. square by 8½-in. deep.

engines that were developed. Realizing that approximately five years is required for a new engine to be perfected and that no immediate solution is in sight for this specialized field of activity, attempts have been made by Ranger to procure suitable contracts as a subcontractor to manufacturers in other industries for the manufacture of peacetime articles for which a demand already exists.

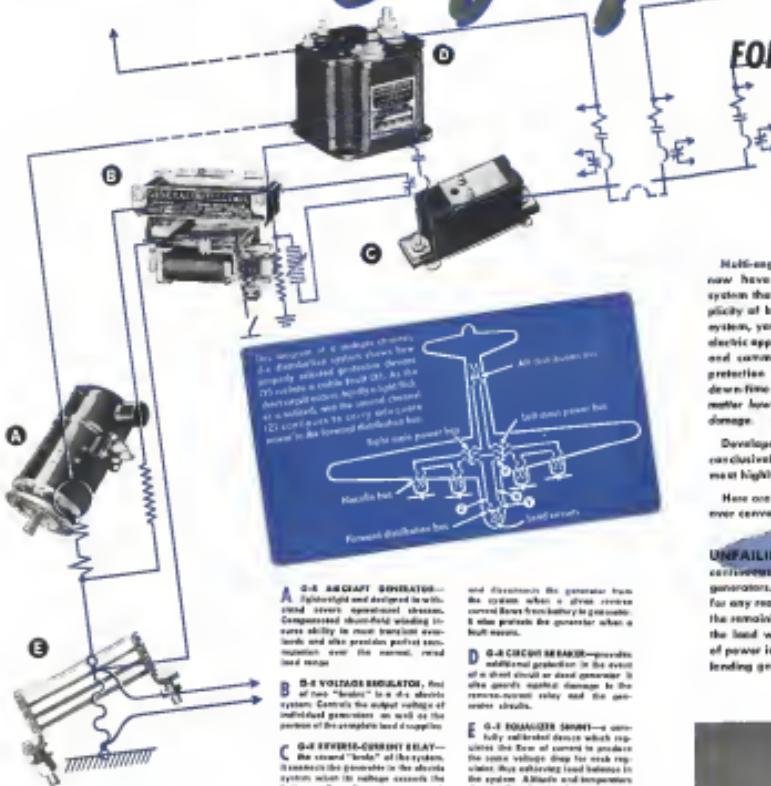
With respect to Fairchild Aircraft Division, no unanswerable problem presents itself in the Allentown locality as long as present Army contract for the C-82 Pak is continued. In connection with this private owned airplane field, Fairchild is giving this problem considerable attention.

• Martin—The Glenn L. Martin Co feels that future sales possibilities for manufacturers of commercial aircraft are extremely limited and that the comparatively small demand will enable the industry to retain only a minor portion of the nation's aircraft producing capacity. The manufacturers of commercial flying boats, in which Martin has always been one of the leaders, is considered a potential source of future sales, although the company has no orders for such craft at present.

A small group of Martin em-



HERE'S NEW Safety... NEW Stability



FOR BIG-PLANE ELECTRIC POWER SUPPLY

Developed for the B-29, this G-E power system makes four or more generators work as a balanced unit—gives a uniform flow of power under all conditions of flight.

Multi-engined aircraft and cargo planes can now have a reliable, lightweight dc electric system that will boost both the safety and simplicity of big-plane operations. With this new dc system, you can make wider use of such modern electric apparatus as motors, heaters, instruments, and communications equipment. You get better protection for expensive devices and reduced downtime for maintenance. Short circuits, no matter how serious, just can't "go places" and do damage.

Developed for the B-29, this G-E system has conclusively proved its practicality on America's most highly classified war planes.

Here are some of the advantages of the system over conventional single-generator systems:

UNPAILING POWER Normally, the system continuously splits the load among all of the generators. If one or more generators "kick out" for any reason, the system splits the load among the remaining generators so that they can handle the load without excessive voltage dips. Plenty of power is still available to operate instruments, landing gear, and other vital auxiliaries.

SHORTS STOPPED Although all generator circuits are closely co-ordinated, individual circuits become independent once trouble occurs. Short circuits are effectively isolated to hold damage to the minimum.

NO LIGHT FLICKER Despite wide variations in load during take-off and landing, all generators act in co-ordination to maintain extremely uniform voltage.

Aircraft manufacturers are turning, more and more, to General Electric for completely engineered systems, such as dc aircraft power supply, generator systems, and engine-temperature control. Their wartime experience has shown that they save time and eliminate many design headaches when they bring their electrical problems to G-E in the earliest stages of their planning. May we do the same for you?

Apparatus Department,
General Electric Co.,
Schenectady 3, N. Y.

GENERAL ELECTRIC
Precision Products
in Engineered Systems
for Aircraft

Lightplane Diesel Perfected

Perfection of a four-cylinder diesel engine for small personal aircraft is announced by Fred Thaheld, former chief engineer and consulting engineer for the Guberman Engine Co. of Dallas, Tex.

Thaheld, now located in Beaumont, Calif., told Aviation News that a four-cylinder prototype rated for 150-hp at 3,600-rpm, has completed a test stand run successfully. The engine, which weighs 110 pounds, will be installed in a plane, probably a Luscombe, for flight demonstrations.

Test Power—He reported that in the test run the engine actually developed 152-hp at 3,000-rpm, with an over-excitation of three gallons per hour.

The inventor said he intends to license his design to a major manufacturer for commercial production of 180 and 150-hp four-cylinder models, and 180 and

175-hp six-cylinder models. He said he is considering several manufacturing offers, including one by a Los Angeles firm and another by an airplane manufacturer in the Philadelphia area.

The Thaheld engine is reported to operate without exhaust smoke and to possess quicker throttle response throughout the entire throttle range than gasoline engines. It uses a special cartridge shell starting.

Weight, Drag—Thaheld declared, "For preliminary production, the engine with approximately the weight per horsepower of comparable gasoline engines, as they are now, can be used in light aircraft now under production without affecting airplane balance. However, later models can be manufactured with a 10 to 15 percent reduction in weight."

Lockheed President Outlines Air Power

From backlog, military and commercial, placed at quarter-billion, research and pilot-line production stressed.

Need for research and pilot-line production to keep the nation's air power in a state of readiness for whatever the future may bring, was emphasized by Robert Gross, president of Lockheed, at a recent news conference in New York.

Looking ahead to the military aircraft of the future, he forecast that air power would be composed of three main parts:

►A striking force of uninhabited missiles—unmanned, remotely controlled aircraft which could be sent vast distances.

►Reconnaissance planes of supersonic speed to act as the eyes of the air force.

►Cargo-carrying planes that could service and supply an army or an air force in the field as ships have done in this war.

Gross said Lockheed had firm orders for \$75,360,000 in commercial aircraft, represented by airline orders for Constellations, and conditional orders totaling \$66,300,000 from air lines for the twin-engine Starliners and the big Constellations.

Lockheed's backlog of military work was given as \$117,665,772 for the P-80 Shooting Star jet-propelled craft, an unescorted Navy patrol bomber, a long-range transport for the Navy, and some development work.

Pick-Up—Total backlog, therefore, is \$201,026,772 and Gross estimated that the backlog would take approximately two years to work off. Regarding the future of the company, he said that it intended going strongly into the commercial field, as it had done before the war, but that it also would remain in the military field. Moreover, Gross said the personnel aircraft field looked attractive and he felt that the company must get into it—but that far it was without specific plans ready for announcement.

Questioned as to the possibility of air cargo becoming the most profitable segment of air transportation, he said "I've never been able to get myself as enthusiastic over cargo per se as for the more precious cargo of passengers and mail." He went on to say that while there would be a tremen-



"**SUCCESSFUL PICK-UP OPERATIONS**," states All American Aviation Corporation.

"Invariably mean flying at altitude and visibility extremes which actually represent instrument conditions. Minimum interruption of service plays an important part in Pick-Up operations as well as other types of airline operations. Building a record of 92% completed schedules through some of the most treacherous flying country in the United States, blazing the trail for other Pick-Up operations, All American Aviation has asked many times on the complete high quality instrumentation of their Pick-Up planes to bring pilot, cargo and ship through safely. Kollsman accuracy and dependability can be one of your greatest assets, too. Be sure to write for the Kollsman Aircraft Instruments catalog. It is packed with facts and specifications to help you select the instruments to provide safe, all-around-the-calendar flight. Address: Kollsman Instrument Division, Square D Company, 80-68 45th Avenue, Elmhurst, New York.

KOLLSMAN AIRCRAFT INSTRUMENTS

PRODUCT OF

SQUARE D COMPANY
DETROIT, NEW YORK
BIRMINGHAM, CALIFORNIA



THE WIDOW'S MATE

Closely photo of the conversion that turned the Lockheed P-38 Lightning into a formidable two-seat night fighter to fly as a companion with the Post Black Widow. Visible under the nose is a radar installation while the seated cockpit placement for a radar operator is shown behind and above the pilot. The radar nose is peering out a shield surrounding the Blackwidow pivoting scope. Designation of the new version is P-38M.

down increase in passenger, mail and express traffic in coming months, the time would never come when everything and everybody would travel by air.

Gross mentioned that an improved version of the Constellation would come next year.

Ford Air Venture Speculation Arises

Appointment of Clyde P. Polson, aeronautical engineer, soon possible groundwork for return to aviation production.

Appointment of Clyde R. Paton, long associated with the aeronautical and automotive field, as a consulting engineer of the Ford Motor Co. has aroused new speculation that Ford may be contemplating another venture into aviation.

While Polson's exact duties were not detailed in the announcement, his experience has been divided between aircraft and automobiles. He worked on powerplant research with the National Advisory Committee on Aeronautics in 1933, later working with both the Packard and Studebaker companies. In 1942, he joined the Allison division of General Motors, went to the Middle East to investigate aircraft operational features. Last year, he established aircraft engine development and flight test facilities for the AAF at Willow Run.

Recurring Name—The prospect of the Ford company's return to

aviation has been a recurring subject of conjecture ever since the firm discontinued production of its all-metal, tri-motor transport about 15 years ago.

Unconfirmed reports during the war conjectured about a large freighter-type aircraft, while the appointment of Paton has provoked talk of a possible Ford aircraft engine to compete with General Motors' projected 2000-hp powerplant.

Ford's first experience with aircraft was in the middle twenties when Harry Brooks interested Henry Ford in a low-wing single-seater. While very slow, it also showed promise, and on the whole had good performance. A number of years later, Brooks died in an accident and Brooks' death allegedly because of Ford's great affection for Brooks, and his grief over the latter's death, the Ford company never sought to develop the design.

Airliner Success—Later, William B. Stout, teamed with Ford to create the famed Tin Goose, which was used on airways over the world and some of which, until the past few years, were still in service as freight carriers in Latin America.

New Lightweight Radio

A new crystal controlled, lightweight aircraft communication receiver will soon be announced by the Collins Radio Co., Cedar Rapids, Iowa.

Using the Collins "Autotune" for

selecting the channel of operation, the receiver offers ten different easily pre-selected frequencies for reception anywhere within the range of 24 to 16 megacycles. Maximum time required to change channels is two seconds. It is designed for commercial transport and executive planes and weighs less than 20 lbs. The receiver operates from a 24 volt dc source, with a 12 volt model as an optional alternate.

British Give Details On Vampire, Hornet

With the lifting of many wartime security restrictions, the British have released fuller details on two of its late fighter planes—the Hawker-made Vampire and Hornet, early reports of which were carried in *AVIATION NEWS*, June 14.

Powered by the de Havilland-designed Goblin jet engine, which was also used in the U. S. P-40 prototype, the Vampire is "believed to be the world's fastest airplane," according to a British statement. Actually, the Vampire is faster than the P-40 above 12,000 ft. At sea level, however, the Shooting Star's 588-mph speed is thought to be top.

Wing Faster—Lockheed's jet fighter does not increase in speed proportionately to the Vampire at altitude because of the former's wing design which is said to reach the compressibility area sooner than the Vampire's.

The Hornet, a conventionally-powered, two-engine fighter, has a top speed in excess of 470-mph. Like the Vampire, it was designed to function at great altitude. 35,000-ft. is the Vampire's claimed operational ceiling; its absolute rate

The Hornet resembles the de Havilland Mosquito and, like it, is of plywood construction. The powerplant installation is straightforward. Although each engine is a Rolls Royce Merlin developing 2,070-hp, the propellers are mounted in the usual position in the wings. The propellers rotate in opposite directions.

Jet Test—This is only one of the programs innovations being tried by the Rolls Royce company. It has gone in heartily for jet experimentation and there are indications that it has already flown a Mosquito with a jet-propeller combination.

A third British airplane, part



STANDARD... Federal's INSTRUMENT LANDING SYSTEM

FIA Club Path Transmitter
(U.S. Transportable Army Type)

When visibility over an airport shrinks...

Here's the instrument landing system, adopted as standard by the Army and Navy, that provides the sure and accurate pathway to earth... developed and manufactured by Federal... opened the world over.

The pilot, guided by his cross-pointer indicator, flies on the intersection of two radio beams... one, a vertical pattern set up by the localizer transmitter which keeps the plane centered over the runway... the other, a horizontal pattern set up by the glide path transmitter

which brings the plane to its fine-point landing. Constantly perfect instrument landing by skilled American airmen prove the reliability of Federal's Instrument Landing equipment... the result of a decade of intensive research... an important contribution to the war... with even wider service promised for the coming age of the air.

For the first in radio aids to aerial navigation and communications equipment... see Federal first.



FIA Club Path Transmitter (U.S. Transportable Army Type)

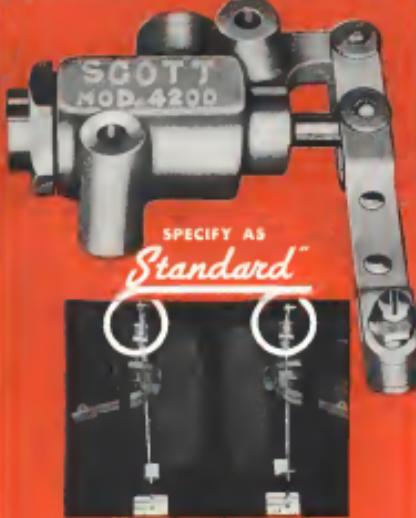
Federal Telephone and Radio Corporation

AN ITT COMPANY
Newark, N. J.

Scott

PARKING BRAKE VALVE

for All Aircraft with Hydraulic Brakes



Specify the fully service-tested Scott Model 4200 Parking Brake Valve for all airplanes equipped with hydraulic brakes. Fully CAA Approved. Increases the safety factor for plane and pilot personnel alike. Here are some pertinent facts: Weight of arm and assembly, 4.75 lbs. Working pressures—50 to 850 lbs. Operating temperatures 40° F. to plus 165° F. On the mechanical side, the Scott Model 4200 has an AH-A-17 Aluminum Alloy body, hard brass seat and steel plated arm assembly. Scott Quality-built, you'll find it adds an additional safety feature to your airplane.



Scott
AVIATION CORPORATION

204 EAST STREET
LANTERN
NEW YORK

taken off the secret list, at the Firebrand IV, the only single-seater torpedo-carrying aircraft. It is built by Blackburn Aircraft Ltd., which has specialized in naval aircraft.

Powered by a Bristol Centaurus 2,500-hp. engine, the Firebrand has a span of 51-ft., length of 39-ft., and a gross weight of 13,670-lbs., which is more than the usual ship-based airplane. Just gone into service with the British fleet, it is expected also as a fighter and dive-bomber.

Canadian Surplus Sale Rule Stressed

Many inquiries by prospective purchasers in the United States of surplus Canadian aircraft has resulted in a reference by the Canadian War Assets Corp., that approval from the United States surplus disposal agency is necessary before American citizens can buy the surplus.

Aircraft sold by the Canadian government is restricted by the Canadian government's Department of Transport, and stories carried in AVIATION NEWS at various times about WAC surplus aircraft availability have brought about inquiries from the United States to Canadian officials. They suggested that prospective purchasers of Canadian surplus aircraft keep this approval requirement of the Surplus Property Board in mind.

► **Cessna Only** — The War Assets Corp., currently has only Cessna Crane twin-engine transports for sale, but expects other types from time to time. The Aircraft Division of WAC points out that numerous prospective purchasers in the United States "are not eligible due to the present agreement existing between this corporation and the U. S. Surplus Property Board wherein neither government nor civilians are supposed to purchase on the other's market unless the items or equipment required are not available in the importer's country."

New Interior Plastic

A plasticized polyvinyl chloride material that can be used in place of leather, rubber and linoleum in aircraft interiors, with a savings in weight, is being marketed by the aerosolized sales division of the B. F. Goodrich Co.



FIRST OF THE SUPER-TRANSPORTS BOEING'S NEW STRATOCRUISER

* Product of a wholly fresh concept of basic aircraft design, the Boeing Stratocruiser opens a great new era in air transport.

* The military prototype of this airplane, the Army's C-97 transport, broke all existing speed records on its first coast-to-coast flight. It flew the 2323 miles from Seattle to Washington, D. C., in 6 hours, 3 minutes and 50 seconds, at an average speed of 383 miles per hour.

* But even more significant than speed are the Stratocruiser's other characteristics — its extraordinary versatility, payload capacity and low operating cost — results of Boeing's broad experience and aggressive engineering thinking. The following pages show what the Stratocruiser is equipped to do.



LOW COST OF OPERATION

In the Boeing Stratocruiser, high aerodynamic and structural efficiency, ease of maintenance and rapid-loading features all contribute to economical operation. A high ratio of useful load to gross weight means less operating cost per cent of payload. And high cruising speed makes possible more trips in a given period, eliminating all fixed costs over more passenger-miles and less miles. This airplane can operate profitably even when carrying less than 20 per cent of payload capacity at present airline rates.

OUTSTANDING PERFORMANCE

One of the reasons why the Stratocruiser is far outperformers contemporary airplanes is the Boeing 117 wing, which enables it to do more work for its weight and size than any other transport. High wing loading and low gross weight per horsepower make possible faster cruising speed and greater all-around performance. In addition, it is cleaner aerodynamically than any comparable aircraft.

A PROVED AIRPLANE

The Boeing Stratocruiser is not a "paper airplane." It is a flying airplane, with "bugs" eliminated through extensive tests of the military prototype. After its cross-country



flight, faster than any other aircraft had ever made the trip, it landed at Washington without a single item requiring maintenance attention. Newest member of the famous Boeing 4-engine family, which includes the Flying Fortress, Stratoliner and Clipper, it embodies many advances contained in the mighty Boeing B-29 Superfortress.

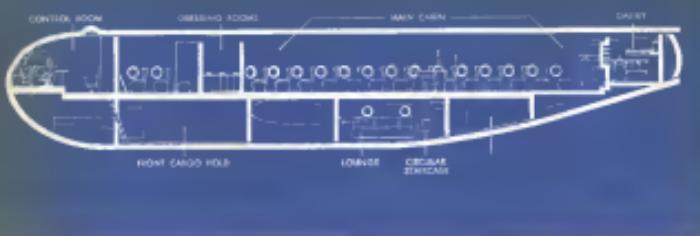
SAFETY AND RELIABILITY

The design of all the Stratocruiser's structural and mechanical elements gives exceptional strength without increasing airplane weight. Superior safety is assured as a result of its unusual ease of control, pilot visibility, stability, good stall warning and excellent stall characteristics, thermal antiicing and other advancements. New war-developed electronic devices will be available for installation, making possible safest operation both in landing and in flight. Additional safety is provided by high-altitude performance, allowing normal flight above storms, even with one engine inoperative.

GREATER UTILITY

The Stratocruiser's broaddeck, three-cabin design, permits adaptation to all types of operation—cargo, high density passenger traffic or luxury travel. Some of the possible





FACTS ABOUT THE BOEING STRATOCRUISER

More than any other post-war transport, the Stratocruiser offers:

- 1 Higher performance
- 2 Greater economy
- 3 Proved ability
- 4 Highest standards of safety
- 5 Greater visibility
- 6 More work capacity
- 7 Added passenger comfort
- 8 A better background of transport and combat airplane experience
- ... and its prototype is actually flying today.

BOEING REGISTERED BY THE U.S. SUPERPOWER • THE FUTURE FORTRESS • THE NEW STRATOCRUISER
THE BOEING COMPANY • THE STRATOCRUISER • PAN AMERICAN AIRLINES

maximum seat: 116 passengers and cargo; 88 passengers and cargo; 75 passengers or 28 berths; 19 seats, lounge and cargo; 72 passengers and two cargo holds, or all cargo. This airplane provides exceptional operating economy for both short flights of 300 miles and long-range transoceanic service. On long flights it can carry both a full fuel load and large payload. At short range, the large interior volume permits maximum payload...

EASE OF MAINTENANCE

Ground service maintenance on the Boeing Stratocruiser is highly simplified. The two-lane construction allows easy access to all tubing, electrical and control assemblies. Power-plants are quickly removable, or accessible without removal for inspection or adjustment. All four units are interchangeable, simplifying overhaul and engine change procedures.

PASSENGER APPEAL

The Stratocruiser offers unprecedented passenger comfort. Its spacious interior provides more room for large, easy seats, a lounge, excellent galley and lavatory accommodations, and greater freedom of movement. High wing-loading and high speed tend to smooth out air currents. Pressurized throughout, the airplane maintains comfortable atmospheric conditions inside the cabin at all altitudes. Ground level pressures can be retained without change up to 15,000 feet, eliminating ear-discomfort in ascent and descent. Insulated against noise and vibration, it is one of the quietest transports ever built.

PERSONNEL

Jeanette Lemcke Named Ninety-Nines President

The Ninety-Nines, organization of women pilots, has elected Jeanette Lemcke of Saginaw, Mich., president, succeeding Ethel A. Shewey of Fortuna, Calif. Formerly vice-president of the National Aeromotoric Association, Lemcke, 36, has been a member of the Ninety-Nines since 1936. She was elected in that year by Bell Telephone, Los Angeles, auxiliary during the past year. Ruth A. Haller, former WAVE of Washington, is the new secretary of Ninety-Nines and Evelyn C. McRae of Miami Springs, Fla., remains as treasurer.

Capt. Richard Deitzler, former administrative officer for the Army Air Forces at the Pentagon, has joined American Airlines as executive assistant to C. H. Smith, chairman of the board.

Capt. Alex Baarstein, Jr., has assumed the position of director of Aerostation for Alabama, from which he has been on military leave in the Army Air Forces. Baarstein has held many permanent aviation positions in Alabama and is well known throughout the country.

William T. Smiley, until recently president of the Canadian government-owned Victory Aircraft, Ltd., Toronto, has been appointed deputy

minister of the Department of Reconstruction and Supply, Ottawa, replacing R. A. C. Beattie, who has resigned to give more time to his post of chairman of the Canadian Air Transport Board.

James E. Gannett, left, has been appointed maintenance superintendent



of Pan American Airways' Alaska service, replacing Peter Gregoire, right, transferred to Pan Am's Atlantic division in New York. Gannett, an aeronautical engineer, joined Pan Am nine years ago as an apprentice engineer. He was transferred to Seattle in 1941.

William L. Wilson, vice-president of Kellott Aircraft Corp., has been elected new chairman of the public relations committee of the Aviation Industries Association, succeeding Jesse W. Swisher of the Curtiss-Wright Corp. Joseph E. Lawton, Jr., director of public relations for the Fairchild Engine and Airplane Corp., was elected vice-chairman.

Richard C. Higgins (right) has joined Transcontinental & Western Air, Inc., as assistant to the vice-president of traffic. Higgins has had travel experience with the Orient-Anchor Steamer Lines, Kellott Travel Club and the Pan American Steamer Lines. He has been with Pan American Airways since 1941, prior to joining TWA, as traffic agent handled rules and regulations, rates and tariffs for passenger and express division.

William H. Bittel, formerly traffic manager and later staff assistant to the executive vice-president of Giese L. Martin Co., has joined TAGA Airways as general traffic manager, northern region, and will be based in Tegucigalpa, Honduras. Bittel previously was senior traffic controller for the Civil Aeronautics Board.



HEADS NAA REGION:

Don V. Stevens' appointment as National Aeromotoric Association regional administrator for the Southwest has been announced. Stevens, who will have headquarters in his region, has been executive director of Federated Airlines Association since its formation and prior to that was with All American Airlines as public relations director. He has been a pilot since 1925 and plans to use a personal plane in covering his new assignment.

Based, Washington. He is a veteran airline man, having been with Western Air Express before it became TWA.



TWA APPOINTMENTS:

Les R. Gilhuron, left, former assistant director of the treasury division of Boeing Airplane Co., Wichita, has joined Transcontinental and Western Air, Inc., as assistant to the treasurer. Dr. John H. Furbush, right, has been named head of TWA's newly created Airline Education program. He will work with all types of educational institutions to study the technical and economic potentialities of TWA. He has been with the U. S. Office of Education and recently completed a year's survey of the educational institutions of South and Central America. He has also made documentary films for the Army.

A NEW CONCEPT IN AIR TRANSPORT

The Martin 202



Outstripping all commercial aircraft of her class, the Martin Two-0-Two provides much higher speeds, more luxurious accommodations and more cargo space than any transport of comparable size. Low direct flying costs and maintenance costs assure profitable airline operation—or fares below first-class railroad rates. Here are some reasons why:

- Cruises at a speed approaching 200 m. p. h.—upward of 100 m. p. h. faster than present day transports.
- On a 250 mile city-to-city hop, direct flying costs exclusive of operating overhead, are less than one cent per mile.
- Carries 30 to 42 passengers—in luxury unapproached by even the largest 4-engine air liners flying today.
- Unmatchable passenger comfort assured by comfortable roomy seats, plenty of head room and leg room, large windows, modern heating, ventilation, sound-proofing and lighting.
- Has far more cargo and baggage space (525 cu. ft.) than any transport of comparable size.
- Three large exterior doors, and two large slots between passenger and cargo compartments, permit swift loading and unloading to cut waiting time on airports.
- Will utilize every new electronic device, including radar, to permit all-weather flying.
- Embodies such improvements as reversible pitch propellers, heat and icing, laminar flow wings, tricycle landing gear.
- Flexible financing facilities cut maintenance costs and contribute to safety.
- Equipment is located below floor, easily accessible for servicing through exterior hatches.

THE GULF L. MARTIN COMPANY, BALTIMORE 3, MD.

FINANCIAL

Airline Earnings Forecast By Financial Firm Analysis

Goodbody and Co., of New York Stock Exchange, presents projection of income for 12 carriers; new study uses compromise of peace and wartime profit margins in calculations.

A prospective projection of airline earnings is advanced in a current analysis presented by Goodbody and Co., New York Stock Exchange firm.

Traffic of the airlines is expected to increase from four to seven

times over present levels in the next three to six years. Based on this expectation and assuming satisfactory unit operating profits with income taxes at 40 percent and with capitalizations increased by 25 or 50 percent, earnings are

projected for twelve of the airlines.

Conclusion. *Point*—It is recommended that future operating profits and capitalizations are highly conjectural. Prior to the war, unit operating profits of most air carriers were very small, Eastern and American being exceptions.

Today, profit margins are quite large, 25 to 30 cents per dollar of gross. If typical pre-war unit operating profits were used, per share results would be meager regardless of the volume.

Similarly, if today's margins were used, the results would be astounding. For this reason, Goodbody and Co. have taken a compromise of the two extremes and presented their projections accordingly.

Conclusion. The substance of these forecasts appear in the accompanying tables. Table I discloses estimated per share earnings with traffic volume at four times present levels. It can be seen, for example, that American is expected to show earnings of 80.11 per share operating at a profit margin of 16 cents a mile and with its present capitalization.

Should profit margins drop to 5 cents a mile, then per share earnings would decline to \$4.43. On the other hand, should the present capitalization be increased by 50 percent, then profits would be diluted to \$7.03 and \$3.54 per share with profit margins of 10 cents and 5 cents a mile, respectively. With capitalizations increased by 50 percent, still further dilution of earnings would occur.

The effect of a seven fold increase in traffic on airline earnings is shown in Table II. Using American again as an example, it can be seen that this carrier's earnings would amount to \$13.88 per share if profit margins of 16 cents a mile with present capitalization were obtained. A 25 percent increase in the capitalization and a profit margin of 5 cents a mile would return earnings of \$4.58 a share.

Intensified service of routes already served may increase traffic greater than average for the industry as a whole. As new equipment is added, it will become feasible to exploit present routes to a greater degree. It is these ever-changing variables which make uniform projections very difficult. The estimates advance, however, serve as a convenient form of making calculations on a comparative basis for the separate lines.

Source: Goodbody and Co.

TABLE I
Estimated net per share with four times present traffic under varying conditions

	A	B	C	D	E	F
American	\$0.85	\$0.45	\$0.90	\$1.50	\$0.90	\$0.55
Braniff	2.05	1.15	1.80	0.60	1.50	0.35
Ch. & So.	5.65	2.50	4.05	2.00	3.00	1.79
Delta	2.50	1.25	2.00	1.00	1.50	0.75
Eastern	10.70	5.35	8.55	3.00	7.50	3.50
National	3.99	1.60	3.55	1.80	2.25	1.10
Northwest	1.35	0.70	1.20	0.60	0.90	0.45
Southwest	4.50	2.20	2.70	1.20	2.00	1.05
PCA	5.45	2.70	4.00	2.11	3.00	1.80
TWA	8.00	3.00	6.00	2.20	5.00	2.65
United	6.00	2.90	4.80	2.00	4.00	1.65
Western	3.00	1.50	2.00	1.00	2.00	1.00

Key: A—16 cents a mile profit and present capitalization
B—5 cents a mile profit and present cap.
C—10 cents a mile profit and present cap. plus 25 percent
D—10 cents a mile profit and present cap. plus 50 percent
E—16 cents a mile profit and present cap. plus 50 percent
F—5 cents a mile profit and present cap. plus 50 percent

TABLE II
Estimated net per share with four times present traffic under varying conditions

	A	B	C	D	E	F
American	\$13.50	\$7.12	\$12.90	\$0.95	\$10.30	\$5.15
Braniff	2.25	1.00	3.00	1.25	1.50	1.25
Ch. & So.	5.65	2.40	4.00	2.00	3.00	2.00
Delta	6.00	2.00	6.00	2.40	4.00	2.00
Eastern	18.75	9.40	19.00	7.50	12.50	9.25
National	5.60	2.80	4.50	2.25	3.25	1.80
Northwest	2.80	1.20	2.00	0.80	1.00	0.80
Southwest	9.50	4.25	8.00	3.40	5.50	2.80
PCA	9.30	4.55	7.00	3.70	6.00	3.10
TWA	14.75	7.40	8.00	3.60	6.00	4.80
United	10.00	4.40	6.00	2.40	3.00	2.00
Western	5.50	2.25	3.00	1.00	2.00	1.00

Key: A—16 cents a mile profit and present capitalization
B—5 cents a mile profit and present capitalization
C—10 cents a mile profit and present AXXX cap. plus 25 percent
D—5 cents a mile profit and present cap. plus 50 percent
E—16 cents a mile profit and present cap. plus 50 percent
F—5 cents a mile profit and present cap. plus 50 percent

Source: Goodbody and Co.

INSTRUMENT SCREWS

EACH ONE A

Picture of Precision



National
SCREW & MFG. CO.

Many civilian products will require precision-made screws of the same high quality that has been perfected for aircraft instruments.

Formerly, it was considered necessary to use Swiss watch-making machinery to produce this fine precision which "National", by its method of upsetting and finishing the head and rolling the thread, has produced all through the war.

From the tiniest screw to the largest sizes, accuracy and uniformity are maintained through "National's" methods of manufacture and thorough inspection. Furnished in many grades of ferrous and nonferrous metals, e.g., carbon steel, stainless steel, brass or bronze.

Let us have your inquiry.

THE NATIONAL SCREW & MFG. CO., CLEVELAND 4, O.

SPECIAL AIR SERVICES

CHARTER NON-SCHEDULED INTRASTATE

Maryland Sets Liberal Policy For Intrastate Airlines

Public Service Commission grants franchises to three companies, including bus line, ordering beginning of service within six months.

Maryland Public Service Commission, acting under orders of the governor to promote aviation, has granted charters to three interstate airlines for unadjusted routes. Service must start within six months from the date of the certificates.

"The commission, in considering the several applications, has been mindful that the policy of the state as announced by Gov. O'Connor and as reflected in recent legislation is to promote the rapid development of air service in Maryland and make it available as soon as possible to all communities which desire it," the Commission stated.

Maryland's populous areas are represented by Chesapeake Bay Airlines, and the state, like Michigan, is more federalizing minded than most.

Engines Factories—Two of the companies will use single-engine aircraft and one plans to operate twin-engine Boeings. "While being inclined to put more confidence in an aircraft equipped with two engines than in a single-engine aircraft, we find that the record indicates a high degree of dependability in such engines and since it is quite apparent that many of the smaller communities will be unable to have better than Class I airfields, which we believe will safely accommodate only the light, single-engine aircraft, the use of such aircraft in daylight contact flying must be justified and to be necessary if many of the small communities are to have air service," it was asserted.

The Commission deemed only four airports suitable for twin-engine equipment. Cumberland's municipal airport is on West Virginia soil and may not be available for intrastate service.

"While no drawing was made of the public hearing of any immedi-

Baltimore, Annapolis, Easton, Cambridge, Crisfield, Chestertown, Westminster, Frederick, College Park (Washington suburbs), Havre de Grace, Bel Air, Belvoir, Chesterville and Breezy Point. Passenger fare will be 6 cents a mile.

A few days after releasing the opinion, the Commission issued general regulations governing control and operation of public air carriers operating under the jurisdiction. These are available from its offices at Baltimore.

Charter Services Get New Demands

New firm illustrates growing popularity of air rentals to business executives. J. H. Wilson named vice-president.

Charter service of airplanes for business executives is already beginning to assume an importance far beyond pre-war status and is expected to expand rapidly as the post-war equipment becomes available, and many business firms will realize the advantages of air travel.

One of the best examples of this new type of service is the recently formed Central States Aviation, Inc., which, operating from Sky Harbor airport near Chicago, has a fleet of 12 twin-engine, four-passenger Cessnas being prepared for luxury travel. Two of the planes are already in service and others will be available soon.

Officials—The new company is headed by O. A. Helius, Chicago restaurant operator and aviation enthusiast, as president, with John H. Wilson, former executive director of National Aviation Trades Association, as vice-president, secretary and general manager. Other associates are Herman Krausen, treasurer; Harold C. Miller and William Turgan, partners in operation of Sky Harbor airport.

The company plans operation of its planes by company pilots on a round trip fare basis, minimum charge being 10 cents, which includes baggage. Future plans include expansion of operations to other airports in the Chicago area, with broadening of the company's activities to include fixed base activities such as sales, flight training and service facilities.

Meanwhile, Beach Aircraft Corp., through its customer service department, is providing a temporary service to executives who are awaiting delivery of the post-war

LOOKING AHEAD WITH LEAR



Aircraft, but less expensive and bushy-lighter than planes 1500. Many America planes have been equipped with Lear radio — and Lear radios will be used in the postwar Civil For Lear Radios are made by

men who know planes and know what aircraft need and want in radios.

Read what Carl Friedlander, President of America Avionics Corporation says about Lear Radios:

"There is a very fast indication of how the equipment over six years ago, as a manufacturer, represented the beginning of high, industry and rugged construction, which have resulted in Lear's enviable reputation as the manufacturer of aircraft radio equipment of high performance and great dependability. Continuous improvements have been made, both here at Lear and elsewhere, in the manner of design, please show me a radio or a communication system and we'll be sure to have it in Lear's postwar fleet of equipment." Signed — Carl Friedlander, President.

This is patriotic imperative. It has come from Lear's 10 years' experience in producing specialized aircraft radio and direction finding instruments. Lear equipped, 100% by aviators for aviators, has found 2000 aircraft principle parts and 1000 radio operation units. Impressed throughout the war, it is ready to deliver even better performance in the days ahead.

The Lear Child — a new two-place, side-by-side private plane with cruising speed of 150 mph, landing speed 30 mph.

LEARADIO

the pilots' preference



LEAR, Incorporated

Radio Division, Great Lakes Division — Aircraft Radio Division, 1000 North Dearborn Street, Chicago 10, Illinois. Dearborn, 2-5000. New York Division, 1000 Madison Avenue, New York 22, New York. San Francisco Division, 1000 Market Street, San Francisco 3, California.

Pesco MOTOR DRIVEN HYDRAULIC PUMPS



PESCO Motor Driven Hydraulic Pump
Capacity: 0.50-100 gpm. 5 gpm-1000
psi. Weight: 140 lbs. 1/4-1/2 hp. Motor:
15-minutes. Intervals. Weight: 16.5 lbs. Motor:
1/4-1/2 hp. 3/12 hp.

Proved by tens of thousands of hours of the toughest kind of use flying, PESCO Feathering Pumps have set a record for performance and dependability that is unequalled. The newest model (illustrated above) has been developed by PESCO engineers to provide a compact, sturdy hydraulic pump unit for propeller feathering that responds in remote control, with split-second accuracy, to the pilot's wishes.

This pump is typical of the many motor driven hydraulic pumps that PESCO has developed for auxiliary operation of aircraft parts. All of them feature Pressure Loading, an exclusive PESCO

development that compensates for wear and the thermal variations brought about by the wide range of altitudes and temperatures through which these pumps must operate. Pressure Loading automatically maintains minimum clearance between pump gears and gear housing, making possible continuous high operating efficiency under all conditions.

Write for descriptive folders on Motor Driven Hydraulic Pumps to PESCO Products Co. (Division Borg-Warner), 1610 Euclid Avenue, Cleveland 6, Ohio.

In Precision Hydraulics, Fuel Pumps,
Air Pumps, Related Accessories...

PERFORMANCE POINTS TO *Pesco* FIRST



Pesco

Beach Model 185. It is renting Cessnas, on a monthly basis for \$100 a day to customers desiring this service, with the rental including pilot, insurance, maintenance, repair, and hangar rental. Beach now has 11 Cessnas, and has 10 more to come.

Air Cargo Company To Buy Douglas

PESO SEC recommends to sell common stock to public.

First public stock offering to be listed with the Securities & Exchange Commission by an air freight company was registered last week by Air Cargo Transport Corp. of New York City to set up a national non-scheduled system.

It is proposed to use \$150,000 of the proceeds for six Douglas C-47s from ILFC, \$154,000 for spare parts and engines, radio equipment, maintenance supplies, \$5,000 for motor vehicles and other ground equipment; \$30,000 for hangars, and \$50,000 to repay company's founders. The Douglas will cost from \$30,000 to \$35,000 each. Pensonion is expected in a few days. The company's new operates one Lockheed Lodestar.

Packets Sought—Balance of stock offerings will go for working capital, under present plans, including one or two French Packets or other available cargo planes, when available.

H. Bay Penick is president, treasurer, and director. Other officers and directors are Alexander Westerner, Brooklyn, director; Louis Delaney, Jamaica, L. I., director; William L. Rose, New York, executive vice-president and director; Thomas M. Reilly, New York, secretary, assistant treasurer, director; F. Malvina Marce, Newark, N. J., director, and William A. Smart, New York, director. Smart and Smart are to be elected officers after the stock offering. Presently, the company's stock holdings are: Pensonion 24,000 shares; Alexander Westerner, 30,000 shares; Meyer Nisenoff, 15,000 shares; Alexander Westerner, 16,000 shares; Bernard Shupack 15,000 shares; and Louis Delaney, 10,000 shares.

The company, organized under New Jersey charter March 14, 1945, registered 400,000 \$1 par-common shares, of which 120,000 are reserved for warrants. The remaining 300,000 shares will be offered publicly at \$3 a share by a group headed by Bond & Goodwin, Inc. The warrants will entitle holders to purchase an aggregate of 120,000 shares at \$3 in the period ending five years from registration effective date.

► **Warrent Sale.**—The stock shares warrants will be sold by the company at a cert. a warrant. For each 10 shares of common stock sold to or through underwriters, the underwriters will be entitled to receive 3 warrants, each exercisable at a cert. per warrant share. In event the underwriters purchase or find purchasers for the entire 300,000 common shares, underwriters will be entitled to purchase a total of 90,000 warrant shares.

vegetables, 17 tons of furniture, 3 tons of machinery, 4 tons of clothing, 4 tons of California wine, 6,000 baby chicks, several motor cars and plane parts. Motion picture players flew from Los Angeles to Las Vegas, Nev., and several contestants of Miss America flew coast to coast.

Feeder Role Vital Says Idaho Board

The Idaho state planning board has gone on record favoring support of regional feeder air services as essential to the state's future program.

Copies of the resolution are being forwarded to chambers of commerce in the state, emphasizing that "feeder airlines are vital to accomplish the tasks of transportation and communication between our regional cities within Idaho and the adjacent states with which we have common economic relationships."

► **Cessna Asked.**—The resolution was introduced at a board meeting which concluded with a luncheon with aero community in Lewiston, Idaho, who has already tied with CAA for a certificate to serve points in Oregon, Washington and Nevada as an Express Airlines.

Zimmerman has already flown leading air enthusiasts of Idaho on surveys of proposed feeder routes.

State Rules Against Sharing Charter Craft

Public Utility Commission of Pennsylvania has turned down an application of an operator for a charter air service because of the possibility that aircraft other than those owned by the applicant would be pressed into service.

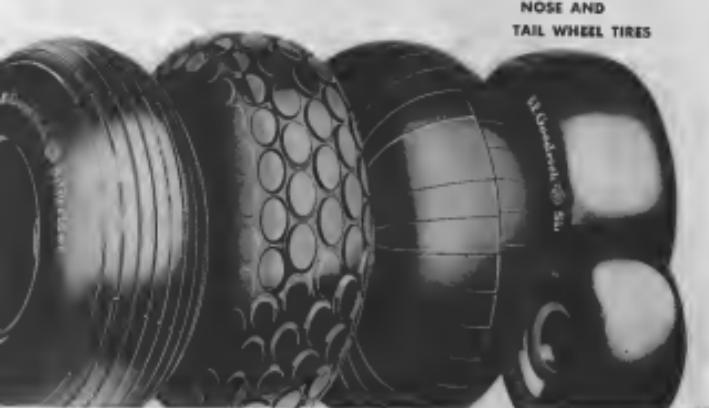
Russell V. (Bob) Traiser had prepared a "call and demand" airplane service along the Allegheny River and its tributaries within a 50-mile radius of Pittsburgh.

► **Decision Lever.**—The Commission indicated that it probably would have given a favorable decision under the proviso of the application which said that aircraft not belonging to the applicant might be used when necessary to meet public demand.

According to a spokesman for Traiser, "It is a question of the Commission being able to supervise an operator. In order to do that they must have control over the equipment through the operator."

The most complete line of rubber products for airplanes

B. F. GOODRICH AIRPLANE TIRES AND TUBES



NOSE AND
TAIL WHEEL TIRES

DE-ICERS AND ANTI-ICING EQUIPMENT...

- De-icing protac wing leading edges on many privately owned aircrafts.
- Two systems to control propeller leading edge anti-freeze feed thru and electrically heated shrouds.



GROMMETS AND GASKETS OF ALL TYPES



ALL TYPES OF
AIRCRAFT HOSE,
shock absorber
cord and tubing.



CONTROL WHEELS



MATTING



SPONGE RUBBER



RIVETS



B. F. GOODRICH DISTRIBUTORS ARE STRATEGICALLY LOCATED THROUGHOUT THE COUNTRY

YOUR B. F. Goodrich distributor sells a complete line of accessories . . . from matting, grommets and molded rubber parts to sponge rubber, traction tape, all types of hoses and flexible propeller feed hoses, as well as the famous B. F. Goodrich-developed low-pressure airplane tires and tubes.

He is distributor for exclusive B. F. Goodrich aircraft items, now De-Icers for use on the larger private airplanes; rubber abrasion shrouds that save leading edges of tail surfaces; abrasion shrouds molded to fit the biting edges of propellers.

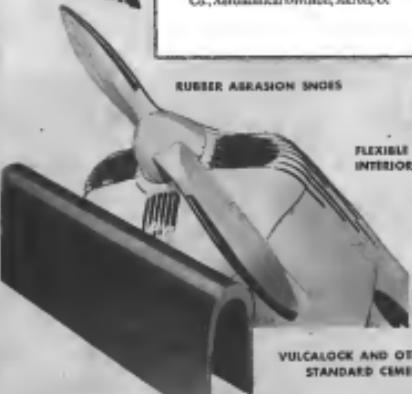
Airplane service operators know the dependability of B. F. Goodrich rubber parts for airplanes. And B. F. Goodrich distributors are strategically located to serve them promptly. The B. F. Goodrich Co., Aeronautical Division, Akron, O.

Skyway or Highway

B.F. Goodrich

FIRST IN RUBBER

RUBBER ABRASION SHROUDS



FLEXIBLE MATERIALS FOR INTERIOR TRIM



VULCALOCK AND OTHER STANDARD CEMENTS

★

SAVE TIME...REDUCE COSTS
by
THIS 6-STEP MANUFACTURING PLAN

When you call Kellett into consultation on your present or postwar design and production program, you have the choice of any or all of these 6 services, in any combination your job requires:

- 1 Engineering Design, by a skilled staff of practical engineers
- 2 Tool Design and Manufacture, with ample facilities available
- 3 Photographic Reproduction for loft-template or direct manufacturing application
- 4 Experimental Manufacture of single-item or pilot models in metal or wood
- 5 Engineering Testing through mechanical and chemical laboratory evaluation
- 6 And most important of all—
Metal and Wood Manufacture, specializing in sheet metal and welded and assembled

AND when you retain Kellett to work with you through one or all of these 6 steps, it is as if you had added an expert, thoroughly-trained, highly-specialized staff, and Kellett's modern plants, laboratories and testing equipment, to your own organization—without a penny's increase in your capital investment.

With 16 years of successful experience in the exacting field of airmobile and helicopter de-

sign, and 4 years of quantity production of \$50,000,000 worth of metal products on plane and sub-contract, Kellett is well prepared to cooperate with you. These 6 steps may enable you to improve product and tool design—speed up production and to simplify reproduction operations—and assure the mass manufacture of simple or complex products developed for industrial or consumer markets.

If you will simply write us to outline your design or production problems, we shall be glad to advise you specifically as to the ways in which Kellett may prove helpful in solving them. Write to Kellett Aircraft Corporation, Upper Darby, Pa.

KELLETT
SUBCONTRACTOR



A product of Kellett design, engineering and production—the K-10-B-5 Autopilot

when these problems are disposed of, the question of taxation seems.

Chairman of the Special Committee on Governmental Regulation during the war airline representative is O. M. Monson, vice-president of American Airlines. Monson also is chairman of Division I. Other division chairmen II E. Smythe, Gambrell, general counsel of Eastern Air Lines, III E. Russell Cawelti, executive assistant TWA, IV, Robert M. Avioli, assistant to the president, PCA V, A. E. Flan, secretary, Northwest Airlines, VI, Haizer Hinshaw, assistant to the president of United Air Lines.

State chairmen and vice-chairmen

Divisions I

Connecticut—Chairman H. A. H. Higgins, United Vice-chairman S. E. Coffey, American Delaware—Chairman, Harry Stevens, All American Airlines, Vice-Chairman, Paul Collins, Northeastern

Massachusetts—Chairman, W. Nelson Burns, American Vice-chairman, A. W. Frazee, W. W. Frazee, Western, Charles T. Brown, Eastern (Boston), Sterling Nelson, United (Springfield).

New Hampshire—Chairman, Paul Collins, Vice-chairman, W. W. Frazee, Western, Charles T. Brown, Eastern (Boston), Sterling Nelson, United (Springfield).

New Jersey—Chairman, Harold New, American, Vice-chairman James Edwards, TWA

New York—Chairman, Robert J.

★

TRANSPORT

"Grass Roots" Airline Support
Sought By Permanent ATA Unit

Lines designate 400 weeks throughout nation to secure local civic, commercial and other organizations' backing of carriers' position on transportation policies, problems; move follows successful blueprint of older industries.

A permanent nationwide organization to enlist "grass roots" support for preservation of sound air transportation policies has been completed by the commercial air carriers through the Air Transport Association.

Taking a cue from older industries where similar groups have been successful, the airlines now have some 400 workers throughout the country who, with the blessings of their management, will solicit support for the carriers' position on transportation problems from local civic, commercial and other organizations.

► **Organization Plan**—ATA's State Relations Department has divided the U. S. into six districts, in each of which representatives of carriers, the state association and chamber of commerce will work together to develop the new organization's activities. These state chairmen, in turn, have lined up co-workers in each of the cities served with scheduled air transportation.

Probably, the first program will deal with the question of exclusive Federal control of common air carriers in interstate commerce, favored by the airlines. During the past year, when 44 state legislatures were in session, the National Association of Railroad and Utility Commissioners urged passage of state air carrier bills in 24 of them. One state, however, enacted laws on these controversial interstate air carriers.

Agitation for such legislation has continued and, in 1947, the situation is expected to be much more serious than it was last winter. The airlines, hence, are anxious to have Congress settle the question once and for all, and do it at this session.

► **Action Soon**—The new airlines' organization is ready for its first assignment as soon as the Special Committee on Governmental Regulation (a subcommittee of ATA's



TWA'S CAIRO OFFICE:

Transcontinental & Western Air says its Cairo office, shown above, will be less than 30 hours from Washington under present international schedules. Sign above the entrance, according to the line's Washington office, says "World's Greatest Airline."

Long, American Vice-chairman, W. W. Castle, TWA (eastern section); R. M. Maddock, United (western section); D. Marston, PCA (New York City).

Proprietary—Chairman, James W. Hall, TWA; Vice-chairman, William C. Parker, Eastern; Vice-chairman, Robert, United (eastern section); Edward Finkle, Eastern (Philadelphia); W. L. Gates, PCA (western section).

Rhode Island—Chairman, W. C. Harbo, American; Vice-chairman, A. M. Hudson, Colonial.

Division II

Alabama—Chairman, Vance Tamm, PCA; Vice-chairman, George McGehee, Eastern.

Florida—Chairman, T. P. Caldwell, Eastern; Vice-chairman, J. D. Cuiper, Jr., National.

Georgia—Chairman, R. D. Hager, Eastern; Vice-chairman, Vic Little, Delta.

Maryland—Chairman, Richard Holman, American; Vice-chairman, Michael Butler, PCA.

Mississippi—Chairman, T. F. Hawkins, Chicago & Southern; Vice-chairman, R. E. Blackford, Delta.

North Carolina—Chairman, James Goodwin, Eastern; Vice-chairman, M. L. Finkbeiner, Eastern.

South Carolina—Chairman, Frank Loomis, Eastern; Vice-chairman, Morris Dye, Delta.

Tennessee—Chairman, W. S. Wren, American; Vice-chairman, W. W. Davis, PCA; PCA, H. C. Douglas, American.

Virginia—Chairman, Ralph Peery, Eastern; Vice-chairman, Charles Johnson, PCA; George Brady, American.

West Virginia—Chairman, G. W. Hines, American; Vice-chairman, Jack Miller, PCA.

Division III

Arkansas—Chairman, Fred Doebolt, Chicago & Southern; Vice-

Constellation Test

Consistent with the discontinuation of airline purchase orders, Lockheed Aircraft Corp. announced a Constellation accelerated service test flight of 4,900 miles in an elapsed time of 38 hours and 38 minutes using the latest powerplants.

The test run was made between Lockheed Air Terminal at Burbank, Calif., and New York by Lt. Col. T. W. Radford and a special Air Transport Command crew.

Schedule—Flight time was 5 hours, 15 minutes, 10 minutes enroute and nine hours and 18 minutes westbound. A transoceanic ground time of two hours and 18 minutes was spent at Mitchel Field, N. Y.

In continuation of the tests the Constellation's engines will be carried through 1,000 hours before overhaul.

Chairman, R. A. Culpepper, American; Vice-chairman, William E. Anding, Continental; Vice-chairman, Edward Nichols, United.

Kansas—Chairman, E. A. Staudt, TWA; Vice-chairman, Horace Goss, Eastern.

Louisiana—Chairman, William Parker, Chicago & Southern; Vice-chairman, David Shaddock, Eastern.

Mississippi—Chairman, W. Sharpenberry, American; Vice-chairman, John Thomas, TWA.

New Mexico—Chairman, E. A. McGehee, PCA; Vice-chairman, Frank Johnson, Western.

Oklahoma—Chairman, Robert Helder, American; Vice-chairman, William Morgan, Braniff.

Pennsylvania—Chairman, D. Miller, American; Vice-chairman, John Barnes, Braniff; J. D. Lee, Eastern.

Division IV

Illinois—Chairman, L. W. King, American; Vice-chairman, C. E. McCalley, TWA; M. W. Stevenson, United.

Indiana—Chairman, Frank Boggs, American; Vice-chairman, R. W. Waldron, TWA.

Iowa—Chairman, Jack Barnes, MacCormick, United; Vice-chairman, C. M. Shirey, Braniff.

Kentucky—Chairman, A. Land Rover, Eastern; Vice-chairman, Andrew Barkhardt, American.

Louisiana—Chairman, Thomas Kerr, PCA; Vice-chairman, Jerry A. Tropiano, American; Clete Ruff, TWA.

Mississippi—Chairman, Norman L. Harg, AA; Jack Burlington, TWA.

Wisconsin—Chairman, René Liedtke, Northwest; Vice-chairman, John Deane, PCA.

Division V

Minnesota—Chairman, H. C. Threlkeld, Northwest; Vice-chairman, C. E. McGehee, Eastern.

Montana—Chairman, H. L. Cummings, Northwest; Vice-chairman, R. S. McRae, Western.

Nebraska—Chairman, M. M. Sherrill, United; Vice-chairman, Bruce Bardsley, Mid-Continent.

South Dakota—Chairman, C. H. Dahlberg, American; Vice-chairman, L. L. Loveland, Northwest.

South Dakota—Chairman, M. A. Kennedy, Northwest; Vice-chairman, C. R. Dwyer, Braniff.

Wyoming—Chairman, H. L. Cummings, Northwest; Vice-chairman, Jerry Brooker, Western.

Division VI

Arizona—Chairman, J. S. Rabbe, American; Vice-chairman, Dick Seeler, TWA.

California—Chairman, Perry Tait, TWA; Vice-chairman, W. C. Dugan, United; William Sample, American.

Hawaii—Chairman, Robert Seeger, United; Vice-chairman, Clarence Tipp, Western.

North Carolina—Chairman, William Brundage, United.

Oregon—Chairman, E. C. Maroney, United; Vice-chairman, Sherman Goss, Northwest.

Utah—Chairman, Samuel Kallang, United; Vice-chairman, Lee Lusk, Western.

Island Appeal

The returning commander of the Pacific wing of the Air Transport Service, Capt. D. W. Tomkinson, predicts little South Pacific island appeal for the post-war tourist, except for use of new jungle spots.

Captain Tomkinson recently ended two years in the MATS job, which has been expanded and vice-president-engineering for Transcontinental & Western Air, he says he plans to settle down in Arkansas, but generally it was believed that he will remain near to TWA's headquarters in Chicago. Tomkinson, 46, now is listed as divorced, a desire by the average tourist to undertake exceptionally long trans-ocean flights at the expense of "stamina, travel and the pleasures of shipboard life."

Washington—Chairman, D. C. Varto, Northwest; Vice-chairman, Willis Camp, United.

'Chosen Instrument' Becomes Mail Issue

Controversial consideration of appropriation to cover new overseas airmail contracts so far has been postponed.

The international aviation issue of regulation airmail contracts as a "community necessity" will again be threshed out when a Post Office Department deficiency appropriation, to cover airmail contracts for the three lines recently awarded North Atlantic routes, comes before Congress.

Advocates of the "chosen instrument" policy, including Sen. Pat McCarran (D-Nev.), will attempt to block appropriations for airmail contracts for Transcontinental & Western Air and American Airlines Overseas, leaving Pan American Airways as the sole mail-supported carrier in the international field. McCarran is a member of the Senate appropriations subcommittee on the Post Office Department.

► Rates Awaited—The Post Office Department, turned down by the Budget Bureau on its proposal for a blanket appropriation to cover the North Atlantic and other contracts, is now awaiting for CAA to set rates so that an exact appropriation request can be made.

It is well remembered in aviation circles that the opposition of the Senate Appropriations Com-

21 JEWEL ENGINE

Like a fine watch, the Allison engine has a "21-jewel movement"—meaning dependability and long life. The jewels are the major silverplated and copper-lead case sleeve-type bearings, which absorb terrific loads and high temperatures from shafts revolving 3,000 times a minute. * Twenty years ago, Allison engineers pioneered the development of higher-precision sleeve-type bearings to enable engines to develop higher horsepower. Today, in stalled in virtually every aircraft engine made in this country—as well as Allison—these bearings have made good—at horsepower far beyond the dreams of the Allison pioneer. * Now Allison bearings are available for other fine engines and machines to serve a world at peace.



SOFT AMERICA DESIGN
BY MICKEY BROWN

POWERED BY ALLISON

F4U-4 Corsair
F4U-4 Corsair
F4U-4 Corsair
F4U-4 Corsair
F4U-4 Corsair
F4U-4 Corsair

Recently, 200 Allison engines have been sold for the above planes of the U. S. Army Air Forces.

Liquid-Cooled Aircraft Engines

Allison
DIVISION OF
GENERAL MOTORS



Every Sunday Allisone-Gemini, Marconi, Armstrong or the Allis—GM Motor

service killed an armed agreement to American Export Airlines in 1948—despite Administration support. At that time, however, there was another major and involved American Export operation by a steaming operation. It was an argument against surface cargo control over an air carrier that export's apprehension was defeated.

Meanwhile, Ben McCarran is withholding further action on his "All American Flag Line" bill, stating that he is undecided as to whether to introduce a new version of the legislation for reference in Senate Interstate Commerce Committee or to offer a new version as a substitute for his old bill which passed being reported out of Senate Committee on a tie vote. It is believed that McCarran may wait until Congress has acted on air mail contract appropriations for the North Atlantic before pushing his carrier company legislation.

N. J. Air Service To Resume Soon

Metropolitan New Jersey is looking forward to resumption, as a matter of weeks, of airline service it has lacked more than three years, with announcements early this month that the War Department is ready to turn back Newark Municipal Airport to the city.

Twenty daily commercial flights have been authorized by Army Air Forces which will retain control of a part of the field. Resumption of service is awaiting CAB action. Eastern Air Lines, American Airlines, United Air Lines and TWA held leases with the city, and four other lines are understood to be ready to sign.

Impressments — With return of the field the city will secure an estimated \$14,600,000 in improvements made since the Army retired in. About \$9,000,000 went for extension of the field and construction of new, longer runways.

The Army will retain about five percent of the field, or approximately 35 acres. Eventually it will give up all but one hangar, 10,000' held for emergency use.

Assessment of the Army's willingness to vacate revealed a conflict in high War Department and Air Forces offices. One faction had hoped to retain the field as a permanent defense installation,

while another had other facilities in mind.

PCAO, IATA

Top Issues Slowed At Twin Meetings

Interim Council lag in consideration of political, economic questions upon which airline group seems in large largely dependent.

Meanwhile, became the interim capital of international air transport last week as two world aviation organizations—one representative of governments, the other of airlines—met there.

The Interim Council of the Provisional International Civil Aviation Organization (PICAO) opened its second session with an agenda expected to keep it busy until early December. The International Air Transport Association (IATA), holding its first annual general meeting, quickly and smoothly dealt with an agenda initially emphasizing organizational questions.

Speed Limit — Both were seeking to carry forward tasks undertaken respectively at Chicago but year, and at Paris last September. Aviation News correspondents reported that while it was clear that a multitude of problems stand in the way of aviation's full utilization, it was not nearly as clear that as rapid progress was being made toward solutions as governments and airlines would be expected to insist upon.

PICAO appeared to be doing admirable work on the technical side of aviation, but there was some concern that it was not moving as strongly to compromise outstanding political and economic issues left in the air at Chicago. To the extent that PICAO acts on these matters, IATA will be hampered in its operations.

Trend of deliberations of PICAO centered on the controversial fifth freedom question indicated that there will be no unilateral commercial rights in any agreement on international air transport which PICAO's Interim Council may eventually submit to the body's full assembly.

Convention Agreements — Recognition of advantages of a multilateral convention in the development of international flying over the present system of bilateral arrangements was unanimous, but it was generally conceded that such an agreement will include definite commercial freedom limitations.

First stages of the work of two statutory committees — on air transport and air navigation — have been accomplished and detailed study of questions involved have been made over so widespread a group. The air transport committee has suspended meetings pending reports from three special committees appointed to consider matters under its jurisdiction.

Work of the air navigation committee has been partially delayed until PICAO's secretary is completed and the necessary technical advisers are available to continue, but four technical subcommittees are in session.

Staff Shortage — Meetings of other air navigation subcommittees scheduled for next month were canceled at the suggestion of Dr. Edward Warner, Interim Council president, because of the staff shortage.

Most IATA sessions were behind closed doors. The organization confirmed unanimously its executive committee's appointment of Sir William Portal Rutherford, British director of civil aviation, as its new general secretary of the organization. It also decided to increase the executive committee from nine to 12, see appointments being Brig. Gen. T. B. Wilson, board chairman of Transcontinental & Western Air; Maj. Gen. T. H. Shear, vice-president and managing director of China National Aviation Corp., and Hassen Sakkis, general manager of Misr Network, Egypt.

C-54 Exemption

The Civil Aeronautics Board has adopted a special Civil Air Regulation making exemption to Part 84 of CAB in order to permit use of C-54E type airplanes as scheduled air carriers.

Effective from Oct. 31 to Feb. 1, 1949, this type aircraft will not be required to have a master switch disconnecting all sources of electrical power from the electrical distribution system. In addition, a maximum take off gross weight of 61,300-lbs. may be authorized when there are no fuel dumping stations on the plane.

CEBERS — C-54Es were recently declared surplus by the Army and allocated to the three major American Airlines — American Airlines Overseas, Pan American Airways, and TWA — certified for trans-Atlantic operations.

Plane common sense—to help flyers

Mechanix Illustrated keeps its feet on the ground while its head and heart go flying. Every one of its air-minded features tries to give practical, usable help to every fellow who's hoping to fly his own plane some day. Maybe it'll be one of the new Piper Skycycles pictured on the August cover and described in detail inside. A fellow can use things like that —



Part of Mechanix Illustrated's steady job is to take ideas out of readers' minds, too. There's a fear of flying which some fellows have that will hurt prospective plane prospects. A lot of "hazards" have been played up — spectacular wartime hazards have been widely ballyhooed. They've created wide misconceptions. So Mechanix Illustrated, alert to the need, decided it was time for plane truths. A feature in August tells 'Fliers "Don't Be Afraid to Fly!" — and tells why. It's going to do you some good, too —

Mechanix Illustrated is the newest magazine in the aviation field. The newest is here first — the soundest is here always. Fellows who are planning to fly their own planes tomorrow are getting their thorough ground courses and pre-flight instruction out of every flying-filled issue of Mechanix Illustrated now. Thousands today — thousands more when the war's won — consider it their aviation magazine. Aviation advertising in Mechanix Illustrated talks the language these fellows pay attention to. You can change flyers to buyers by telling them your plans for them.

The Magazine that Makes Plane Facts Exciting.

AA Considering Additional DC-28's

Public response to American Airlines' use of a 28-passenger DC-3 between New York and Boston has been so favorable that the company probably will fit others to carry a similar passenger load as short flights.

American calls the plane the DC-28. Deiran whether to build more will be based on air traffic, reservation and operational data. Details on operation are not yet available.

Double Check.—To obtain public reaction, cards with requests for opinion were placed in the seats, and company representatives rode on the initial trips. Information from these two sources has convinced the company that people like the modification, and particularly that feature of it whereby they handle their own baggage (Aviation News, Oct. 8).

A number of first time air travelers have ridden on the airplane. It probably was one of these who told a fellow-passenger that he was riding in a DC-4 and thought it was surprising that the airlines had been able to place them in service so rapidly.

Except for one special trip to Washington, the modified DC-3 has been used exclusively on the New York-Boston run.

Pan Am Domestic Entry Opposed By 10 Lines

Pan American Airways' attempt to enter the domestic air transportation field without the requirement that traffic be diverted for foreign ports, appears headed for strong opposition.

At a preliminary conference last week on PAA's application for eight routes across the U. S. to link its international gateway cities, at which it could carry domestic air travelers 10 other airlines indicated that they will seek either to intervene or to appear as applicants through requests for a consolidated proceeding. Some of these lines have already filed applications for service in the areas involved, while others contemplate doing so. The 10 are: American Airlines, Braniff Airways, Delta Air Corp., Eastern Air Lines, National Airlines, Northwest Airlines, PAA, TWA, United Air Lines, and Western Air Lines.



Inside 'Mass Travel' DC-3: Cabin view of American Airlines' 28-passenger DC-3, looking towards rear, shows existing arrangements and narrowed aisle. Cabin door shows double seat with full width safety belt, baggage and coat racks for passenger and crew members' luggage with windows in partition. Non-adjustable arm rests have a hinged arm rest because there's



IT'S EASY TO LOAD THE FAIRCHILD PACKET

The Army can drive 10-wheeled trucks, tanks, and many other units of heavy military equipment right into the spacious hold of the Fairchild "Packet".

Or bulky cases can be "walked" from a trailer truck directly onto the floor of this "bomber boxcar." (Note: Horizontal "Packet" floor is same height as standard truck floor.)

Smaller packages can be loaded through the forward door or through the paratroop doors at the rear when the tail is closed.

Think what this efficient cargo handling will do for the air shippers of tomorrow! Fast flying freight . . . safe, easy loading . . . costs comparable to surface transport at air express speeds.

All Fairchild Aircraft Division's production facilities are now booking the "Packet" in quantities exclusively for the Army Air Forces.

Additional and more detailed information can be obtained by writing Transport Sales Division, Fairchild Aircraft, Hagerstown, Maryland.

USE U. S. WAR BONDS AND STAMPS

Fairchild Aircraft
Division of Fairchild Engine & Airplane Corporation, Hagerstown, Maryland



THE Anchor Bushing WAY

BEFORE YOU TOOL FOR PRODUCTION

- Shorten your lifting and tool making timetable by weeks.
- Permits complete tooling—whether "production" constitutes ten or ten thousand units.
- Revolutionary in scope, yet extremely simple both in principle and application.
- Checks the most feasible method of people tooling for sheet metal structures over several.

A description of the "Anchor Bushing Method of Apply Template Making" is yours for the asking.

Write Attention Dept. E

1 Industrial Bldg. - P.O. Box 999

1559 Sepulveda Boulevard
Hermosa Beach, Calif.

ATA Move To End Air Delays Workable Here, Opposed Abroad

State Department experts see success of action to eliminate customs, visa, passport slowing of air travel in Western Hemisphere but warn of ancient obstacles in Europe, Asia.

By BLAINE STUBBLEFIELD

The Air Transport Association's altered, and are serialized White-computers to remove passport, visa, aisle. Very often physical examinations are required for protection against communicable disease. But, if any practical short cuts can be worked out, they would be welcomed officially.

Border controls are mainly laws, not mere regulations. Any important changes will have to be made by Congress. Interdepartmental conflicts will have to be

settled. Separation between nations apparently will continue. Ancient disputes and distrust will be hard to break down in Europe and Asia. Emigrant pressure toward the United States, due to war-investigated conditions nearly everywhere else, is tremendous. Illegal entries continue on a large scale.

Personal Problems—It would be difficult, authorities argue, to devise a universal travel card, proposed by ATA, that would have the personal documentary character of the present passport procedure. Even passports are widely

Rainbow Ordered

Pan American World Airways has on order a fleet of Republic Aircraft Corp.'s high-speed propeller transports, the manufacturer disclosed last week. Delivery of the first six is expected to start within 22 months. Cost is to be \$1,000,000 each.

Claimed to be the fastest commercial transport design, the Rainbow (AVIATION NEWS, Sept. 30) has a guaranteed cruising speed of 400 mph and a maximum range of 4,000 miles. The 46-passenger cabin will be pressurized for high-altitude operation.

Additional details on the Rainbow, released by Republic, puts its gross weight at 32,000 pounds, wing span at 100 feet, 6 inches, and overall length, 56 ft. It is designed to carry a 10,000-lb. payload 4,500 miles. Design air speed is 400 mph, with a maximum cruise speed of 380 mph.

AVAILABLE
Endorse 2000 aircraft, including 600
models of French engines with a listing of
the principal manufacturers. Also
a listing of principal aircraft manufacturers
and a listing of principal aircraft
manufacturers and their products.
THE AVIATION NEWS
1000 Avenue of the Americas, New York 36, N.Y.

FEEDBACK INFORMATION
Endorse 2000 aircraft, including 600
models of French engines with a listing of
the principal manufacturers. Also
a listing of principal aircraft manufacturers
and a listing of principal aircraft
manufacturers and their products.
THE AVIATION NEWS
1000 Avenue of the Americas, New York 36, N.Y.

MILLAR CELESTIAL COMPASS

A new lightweight and compact precision compass which is unaffected by magnetic or electrical disturbances. True bearing, bearing or compass checks are obtained with extreme accuracy.

Unusually designed to be easily suspended from the top center of the astrodome with a free swinging instant bearing as part of the instrument. Components are replaceable in seconds.

As a result of extensive flight tests it was found to be an invaluable piece of operational equipment for intercontinental flying.

MILLAR INSTRUMENT COMPANY, INC.
22 Plane Street Newark 2, New Jersey, U.S.A.



Skil



The Essence of Perfection

IN EVERY FIELD, from fly fishing to metal fabrication, skill is the essence of perfection. Particularly is that true in manufacturing products of stainless steel or similar high temperature alloys. They're difficult metals to work and many times inferior substitutes are used for this very reason.

If certain parts or your entire product can be built better with stainless, subcontract this work to Solar. This company for the past fifteen years has been the industry's leader in engineering, designing and manufacturing heat and corrosion resistant products.

A letter addressed to "Service Department" will put you in contact with the men who, during the war, produced exhaust systems, heat exchangers, jet engine parts and many other products for the country's leading airplane manufacturers.



SOLAR
HIGH TEMPERATURE ALLOY PRODUCTS

SOLAR AIRCRAFT COMPANY SAN DIEGO 12, CALIF. DES MOINES 5, IOWA

dealt with. The State Department handles passports; visas come under the Department of Justice and of State, customs are a Treasury responsibility.

Thus, even here at home, drastic revision of old institutions and habits would be necessary. Not the least obstacle would be the usual inertia of bureaucracy and job holders.

► **WHAT TIME** — All observers say that ATA has a good idea. Talk of

low fares on 10-hour trips to Europe, for example, is all right till the customer runs against the two-day-to-weeks-long red-tape of getting a passport and visa. Time lost preparing for air trips is proportionately far greater than for surface trips.

It was suggested, by an informed source, that persons who expect to fly cross-border get passports far in advance and hold them. Persons who have obtained one passport can get the next one in two or three days.

At present, U. S. citizens entering Canada need only proof of citizenship, same for Canadians coming here, but they need passports for more than 29 days. U. S. tourists need only a card to enter Mexico, but they need passports. Later, tourists and business travelers need passports. Passports are required of Mexicans entering the U. S., but total regulations of travel between the two countries are about even. Traveler dwells on both sides can cross on border cards.

► **Hope Here** — ATA hopes, as a first step, that card travel can be established between here and Mexico and Canada. Immigration

pressures within this hemisphere are very light, espouse a almost non-existent. Freedom of movement, State Department admit, should be attainable.

Loosening of travel and customs barriers throughout the world would be a major step toward international cooperation, and Congress undoubtedly will make initial moves in that direction.

ATA hopes that steamship, rail and bus operators, all of whom would benefit, will join its campaign. A joint committee to study the problem will be named in the next few weeks.

Two U. S. Lines Start London Trips

Pan American, American Air Lines, Overseas open operations. TWA may not begin for month.

Two of the three U. S. flag lines awarded routes across the North Atlantic last summer by the Civil Aeronautics Board, are starting service to London.

Pan American Airways re-established its North Atlantic service between New York and London on Saturday, Oct. 26, and American Airlines Overseas is to begin operations Tuesday, Oct. 29. ► **Survey Flights** — Trans-Continental & Western Air, the third line, has not completed survey flights over its European routes, and may not begin scheduled trans-Atlantic commercial operation for another month.

Both American Overseas, formerly American Export, and Pan American are using C-54AE's. Pan American exports flight time from New York to London to be about 13 hours.

Pan American says it is permitted two round trips between the U. S. and United Kingdom under U. S.-British agreement, and the new transatlantic service therefore will be limited to this number. Hope was expressed that the number may be increased soon and the State Department already has indicated that will happen (Aviation News, Oct. 15).

► **Cost Drugs** — Fares will be \$275 one way and \$405 round trip. This compares with pre-war flying boat fares of \$375 one way and \$675 round trip. Pan American hopes that rates may be lowered if frequency increases.

Meanwhile, the line will continue to operate flying boats on twice-weekly schedules to Lisbon.



STARTING LINE

Beginning with V-J Day and continuing through the plant clearance and inventory period, the Beech plant has lacked the sounds of production.

New sounds of rivet guns, presses, drop hammers, and compressors again are heard. The production of peace-time airplanes has begun at one end of the plant while the war surplus clearance goes at the other.

The modest beginning of a production line shown above is like the first sign of Spring. It forecasts the future. Soon there will be several production lines operating, with new personnel

BEECHCRAFTS leaving them for all parts of the world, to contribute to the reconstruction efforts of all nations.

BEECHCRAFT invites inquiries about peace-time airplanes that will render the same class of ruggedness, dependability, and efficiency that has become the world-wide reputation of the BEECHCRAFTS built for the war. All types of BEECHCRAFT products will be designed and built in a way that will enhance BEECHCRAFTS' priceless reputation for quality products.

Beech Aircraft
CORPORATION
BEECHCRAFTS DID THEIR PART
WICHITA, KANSAS, U. S. A.

AERONAUTICAL ENGINEER WANTED

Knowledge or experience in aircraft propeller design desired but not necessary. To supervise engineering department of propeller and wood propeller manufacturer. State age, marital status, details of education, experience and salary expected. Address letters to

SENSENICH BROTHERS
LANCASTER PENNA.



FOR TOMORROW'S SKIES

Rapid forward strides in the development and design of Sikorsky helicopters are being made every day. These types have been in quantity production, the Army R-4, R-5 and R-6. Sikorsky helicopters were the only ones in active military service.

Now Sikorsky is concentrating as never, more powerful designs. Needed, as an essential part of the important and extremely interesting work, are structural engineers, weight engineers, layout and detail draftsmen.

WRITE TO: PERSONNEL DEPARTMENT, SIKORSKY AIRCRAFT, SOUTH AVENUE, BRIDGEPORT 1, CONNECTICUT

SIKORSKY AIRCRAFT
Bridgeport 1, Connecticut



Through its properties of the Pennsylvania Central Airlines, Inc., and its owned cargo subsidiary, SWITLIK, spans the door to world transportation. The fleet of six small and cargo planes, equipped by SWITLIK STAFF, will produce the following SWITLIK SALES-CRATES, the

Switlik Cargo Crate

is easily adaptable for use with large or small planes, may be dropped complete in one piece, and will safely handle the most fragile articles without special packaging. Because of its unique design, it can provide maximum flexibility in packaging size and weight, and is easily loaded and ground handled.

SWITLIK CARGO CRATES are available in a variety of sizes and types, covering every requirement of the cargo industry, and are manufactured exclusively of air transported.

For further information, write to SWITLIK PARACHUTE COMPANY, Dept. S-16, Trenton, New Jersey.



with fares reduced Oct. 29 to the pre-war figure of \$390. Flying time and passenger fares between New York and London are to be cut further by Nov. 15, when additional C-84's are expected to be available.

Pan American notified CAB last week that it intended to serve London by landing at Burn and/or Bovingdon. The former is 158 miles from London and probably would entail a shuttle connection by British Overseas Airways. Bovingdon is 18 miles from London.

American Airlines' trans-Atlantic operation will start with three round trips each week between New York and London. One of these round trips will serve Boston. Eastbound flights will leave New York Tuesday, Thursday and Saturday, while the return flights will leave London on Wednesday, Friday and Sunday. The Tuesday eastbound and Wednesday westbound flight will stop at Boston. All flights will be made by way of Newfoundland and East.

The first American flight will leave the International Terminal at LaGuardia Field at 3 p.m. Tuesday. The equipment used will be exclusively DC-4s, counterpart of the Army C-54s. American will fly a crew of seven, captain, first

officer, navigator, radio operator, flight engineer, purser and steward.

Ralph Batten, president of AA, and Harold B. Burns, vice-president and general manager of American Export Airlines, discussed the plans for the trans-oceanic operation with members of the press last week in an aerial press conference held over New York City in the first DC-4 to be certified for civilian transport use.

CAB Tightens Liaison As Lines Speed Tempo

The Civil Aeronautics Board viewing the increasing tempo of the air transport industry, has tightened its liaison with the air carriers "on matters not otherwise reported to the Board through established channels."

Charles O. Cary, executive assistant since July, 1944, to Chairman L. Welch Pogue, has been placed in a new job as Special Assistant to the Board to carry out the work. The CAB announcement says he

will confer with airline personnel on economic, labor, operational and developmental problems. The Board thus expects to gain firsthand, prompt information on industry problems of a day-to-day as well as a policy nature.

Successor — Miss Marion L. Newson will succeed Cary in

Pogue's office, where she has been the Chairman's secretary since March, 1943. She has been with the Board since its organization in August, 1938, and for three and a half years was its recording secretary.

Name Change Vote

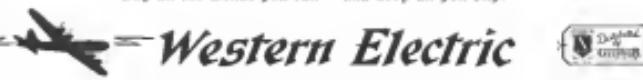
The change in name of American Export Airlines to American Airlines Overseas, Inc., recently approved by American Airlines' board of directors, was up for stockholder ratification late last week. Company officials said full approval was a foregone conclusion.

Executive Office



By shrinking distance, international airways will make the business man's world far larger than ever before. In his stride, he can keep appointments in Chicago, London, Moscow and Bombay on successive days. His own world will become truly world-wide.

Buy all the Bonds you can — and keep all you buy!



Marshall and the Role of Air Power

GENERAL MARSHALL'S brilliant 72,000-word report on World War II will take its place as a great document of history. Because of the general's unparalleled prestige on Capitol Hill and with the public's influence will be considerable. Yet, except for one extended passage on the strategic and tactical bombardment of Germany, headed "Victory in the Air," and a few scattered paragraphs, the report virtually ignores the decisive role of air power in the victory of allied arms over Germany and Japan.

This is regrettable. Never has it been more urgent for Congress to understand fully the role and value of air power, and the necessity to keep it with continued aeronautical research, development, and production.

A possible but made-up reason for the omission may have been Marshall's feeling that General Arnold is making a separate report to Secretary Patterson covering the achievements of the Army Air Forces. However, in any overall report on the strategy of victory and the progress of the various campaigns, more specific recognition should have been made by the Chief of Staff concerning the branch of the triple-headed U. S. Army which, with Naval air, knocked Japan out of the war without a costly invasion of the home soil, the threat of which caused Italy to capitulate, and which was more than any other single factor acknowledged to be responsible for the final collapse of Germany.

ON THE OTHER HAND, it should not be inferred that General Marshall was actually anti-air force in his magnificent job of re-arming the country for the coming conflict, which will be his everlasting monument as Army Chief of Staff before and through World War III. He it was who rescued the late Lt. Gen. Frank M. Andrews, one of this country's original air pioneers from oblivion, made him his G-3 in charge of training and operations, gave him the vital Caribbean and Canal Zone defense command, then at a crucial time the important Middle East Command. This in turn was but preparation for the big job of commanding general of the entire European operations, land and air, in the early part of which he was lost in a crash during a routine air inspection flight. If this had not happened, it is likely that

the commanding general of the allied forces which brought Germany to defeat would have been distinctively an air officer.

While all this was going on, General Marshall was working at Headquarters to give General Arnold every possible assistance in his task of building up a powerful striking air force from pitifully small beginnings. With General Arnold's elevation to membership in the Joint (USA) and Combined (Anglo-American) Chiefs of Staff, General Marshall consistently backed his policies at such critical points, for example, as the Casablanca decision for the AAF to confine bombing, and the capture of the Marianas for what proved to be the decisive B-29 operations.

ALL THIS IS TRUE, and wholly to the good, but the fact remains—and Congress should note and ponder—that General Marshall's report reflects the viewpoint of an able but conservative Army officer. Ground strategy and tactics, logistics, the capture of positions, artillery, tanks are the all-important considerations. Air activities are but preliminary or at best auxiliary operations. And even on this level, admitting the fact that the details reach the public in General Arnold's previous and forthcoming reports, there are notable omissions as to the genuinely decisive part played by tactical air power itself in connection with certain critical points of the various campaigns.

These might well have been covered at least in a sentence or two to show that air's decisive part was realized, permitting the details to follow in the report of the commanding general of the Army Air Forces. Tactical air power's unique role in teaming with General Patton in his lightning dash across France is one example, as's part in the "battle of the bulge" is another.

In the light of the atomic bomb and fantastic air weapons in being or under development, air's future role in possible offense and defense will be greater than ever. The single department of defense, with co-equal air, should certainly get a better hearing than it has had to date. It is significant that on the Army side the highly successful team of Ike Eisenhower and George S. Patton, firmly knit in Africa and Europe, will shortly be functioning in Washington.

ROBERT H. WOOD



Any port in a storm ... but there are no ports

More than one sailor has said, "It's a hellish place to fight a war!"

That's a miracle of understatement when you know the Pacific as well as the U. S. Navy knows it.

They know how many thousands of miles you have to go before you reach the fighting front.

They know there's almost continual rain and bad weather to hamper operations after you get there.

And they know there are no good ports.

Think of the thousands of ships, and the millions of tons of supplies it takes to keep our fighting forces moving toward Japan.

English, if you can, the problem of handling these ships and supplies with no port facilities.

There are no giant cargo cranes, no miles of docks and warehouses—nothing but beaches, and broken boats, and a refusal to call any job impossible.

Remember, too:

It takes 3 ships to do the supply job in the Pacific that 1 ship can do in the Atlantic.

It takes 6 to 11 tons of supplies to put a man on the Pacific battlefield, and another ton per month to keep him supplied.

It takes a supply vessel, under ideal

conditions, half a year to make one round trip.

Add up those facts, multiply by the number of sailors, soldiers, and marines for whom the Navy is responsible.

Maybe you'll begin to realize what "no ports" can mean in the rough, tough waters of the Pacific.

Maybe you'll see that we have two reasons to be proud of the U. S. Navy. First, the way they've made the enemy's ships.

Second, the way they sail your ships through the worst the Pacific can dish them—by keeping the supply lines open ... keeping the attack on schedule!

SPERRY GYROSCOPE COMPANY, INC., GREAT NECK, N. Y.

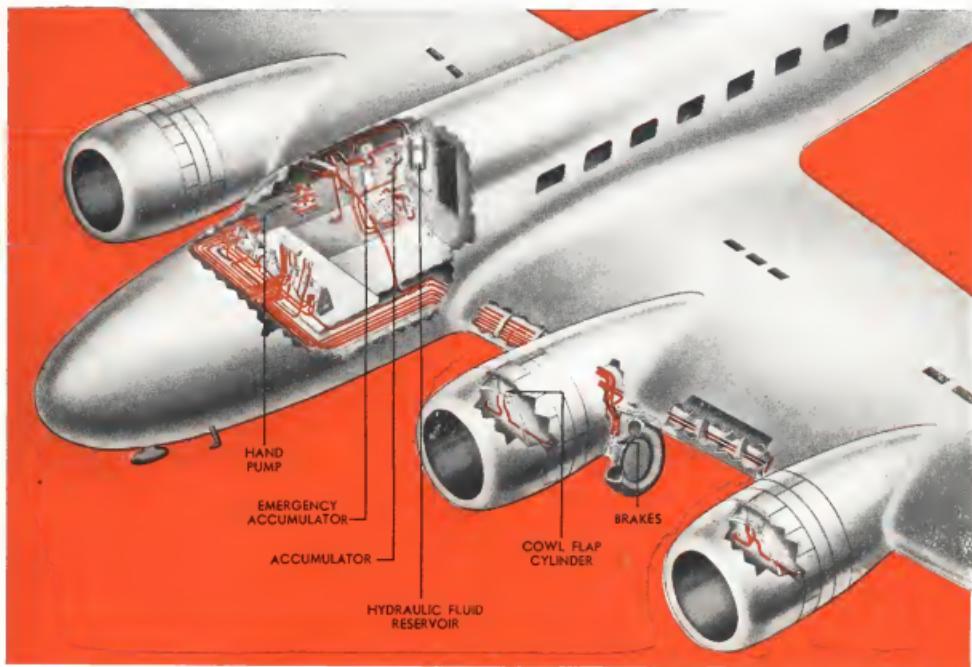


Divisions of the Sperry Corporation

LOS ANGELES • SAN FRANCISCO • BOSTON • NEW ORLEANS
CLEVELAND • BROOKLYN • HONOLULU

MAKERS OF PRECISION INSTRUMENTS FOR THE ARMED FORCES

Keep these Power Lines **CLEAR!**



**Special Socony-Vacuum
Hydraulic Fluids Resist Formation
of Clogging Deposits in All
Temperatures . . . Assure Smooth
Power Transmission!**

AIRCRAFT hydraulic systems, like the one shown in the cutaway above, must perform unfailingly in Arctic cold or Equatorial heat.

To meet this important requirement, Socony-Vacuum's aircraft hydraulic fluids are carefully refined to give the maximum resistance to line-

clogging deposits—in all temperature ranges.

In commercial and private planes, and in warplanes everywhere, they are proving outstanding for smooth, sure control of landing gear, brakes, surface controls, automatic pilots, cargo winches.

Their excellent performance records are typical of Socony-Vacuum's leadership in providing only highest quality oils and greases for the aviation industry.

SOCONY-VACUUM OIL COMPANY, INCORPORATED
26 Broadway, New York 4, N. Y., and Affiliates: Magnolia
Petroleum Co., General Petroleum Corporation of Calif.

Tune in "Information Please"—Monday Evenings, 9:30 E.W.T.—NBC

For War-Proved Aviation Products

Call in Socony-Vacuum

